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<210> 4822

<211> 195

<212> PRT

<213> Homo sapiens

<400> 4822

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Ser	Val	Pro	Leu	Pro	Glu	Ser	Thr	Arg	Glu	Leu	Gly	Glu	Leu	Leu	Gly
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Glu	Ala	Arg	Tyr	Tyr	Leu	Val	Gln	Gly	Leu	Ile	Glu	Asp	Cys	Gln	Leu
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Ala	Leu	Gln	Gln	Lys	Arg	Glu	Thr	Leu	Ser	Pro	Leu	Cys	Leu	Ile	Pro
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Met	Val	Thr	Ser	Pro	Arg	Glu	Glu	Gln	Gln	Leu	Leu	Ala	Ser	Thr	Ser
				85				90						95	
Lys	Pro	Val	Val	Lys	Leu	Leu	His	Asn	Arg	Ser	Asn	Asn	Lys	Tyr	Ser
			100					105					110		
Tyr	Thr	Ser	Thr	Ser	Asp	Asp	Asn	Leu	Leu	Lys	Asn	Ile	Glu	Leu	Phe
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Asp	Lys	Leu	Ala	Leu	Arg	Phe	His	Gly	Arg	Leu	Leu	Phe	Leu	Lys	Asp
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Val	Leu	Gly	Asp	Glu	Ile	Cys	Cys	Trp	Ser	Phe	Tyr	Gly	Gln	Gly	Arg
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<210> 4823

<211> 1984

<212> DNA

<213> Homo sapiens

<400> 4823

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 Ser Pro Lys Thr Cys Asp Ile Val Ile Glu Gly Ser Gln Ser Pro Thr  
 325 330 335  
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 340 345 350  
 Glu Ala Glu Val Gly Ser Asp Gly Glu Arg Val Ala Gln Thr Pro Asp  
 355 360 365  
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 435 440 445  
 Arg Lys Cys Leu Phe Arg Asp Gly Lys Gly Gly Val Phe Val Cys Ser  
 450 455 460  
 His Gly Arg Ala Lys Met Glu Gly Asn Ile Phe Arg Asn Leu Thr Tyr  
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 Ala Val Arg Cys Ile His Asn Ser Lys Ile Ile Met Leu Arg Asn Asp  
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 Ile Tyr Arg Cys Arg Ala Ser Gly Ile Phe Leu Arg Leu Glu Gly Gly  
 500 505 510  
 Gly Leu Ile Ala Gly Asn Asn Ile Tyr His Asn Ala Glu Ala Gly Val  
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 530 535 540  
 Glu Phe Leu Ala Ser Arg Ala  
 545 550

&lt;210&gt; 4821

&lt;211&gt; 585

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 4821

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<210> 4820

<211> 551

<212> PRT

<213> Homo sapiens

<400> 4820

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			20					25					30		
Tyr	Leu	His	Leu	Pro	Asp	Leu	Gly	Arg	Cys	Ser	Leu	Val	Cys	Arg	Ala
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Trp	Tyr	Glu	Leu	Ile	Leu	Ser	Leu	Asp	Ser	Thr	Arg	Trp	Arg	Gln	Leu
	50					55					60				
Cys	Leu	Gly	Cys	Thr	Glu	Cys	Arg	His	Pro	Asn	Trp	Pro	Asn	Gln	Pro
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Asp	Val	Glu	Pro	Glu	Ser	Trp	Arg	Glu	Ala	Phe	Lys	Gln	His	Tyr	Leu
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Ala	Ser	Lys	Thr	Trp	Thr	Lys	Asn	Ala	Leu	Asp	Leu	Glu	Ser	Ser	Ile
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Cys	Phe	Ser	Leu	Phe	Arg	Arg	Arg	Arg	Glu	Arg	Arg	Thr	Leu	Ser	Val
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Leu	Ser	Lys	Val	Phe	Pro	Glu	Asp	Met	Ala	Lys	Tyr	Arg	Ser	Ile	Arg
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&lt;210&gt; 4819

&lt;211&gt; 1655

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 4819

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&lt;210&gt; 4818

&lt;211&gt; 135

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 4818

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			20				25						30		
Ser	Gln	Ala	Gly	Leu	Asn	Gln	Lys	Leu	Asn	Phe	Ile	Val	Thr	Gly	Leu
		35				40						45			
Gln	Asp	Ile	Asp	Lys	Cys	Arg	Gln	Gln	Leu	His	Asp	Ile	Thr	Val	Pro
	50					55					60				
Leu	Glu	Val	Phe	Glu	Tyr	Ile	Asp	Gln	Gly	Arg	Asn	Pro	Gln	Leu	Tyr
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Thr	Lys	Glu	Cys	Leu	Glu	Arg	Ala	Leu	Ala	Lys	Asn	Glu	Gln	Val	Lys

<210> 4815  
 <211> 528  
 <212> DNA  
 <213> Homo sapiens

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<210> 4816  
 <211> 105  
 <212> PRT  
 <213> Homo sapiens

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 Pro Ile Thr Lys Pro Thr Ser Pro Ala Pro Ala Ala Gln Ser Thr Asn  
 50 55 60  
 Gly Thr His Ala Ser Tyr Gly Pro Phe Tyr Leu Glu Tyr Ser Leu Leu  
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<210> 4817  
 <211> 1106  
 <212> DNA  
 <213> Homo sapiens

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 260 265 270  
 Thr Thr Val Arg Thr Pro Lys Asp Ile Ala Ser Glu Asn Ser Ile Ser  
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 Arg Leu Leu Phe Cys Cys Trp Phe Pro Trp Met Leu Arg Ala Glu Met  
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 Gln Ser  
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&lt;210&gt; 4813

&lt;211&gt; 400

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 4813

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&lt;210&gt; 4814

&lt;211&gt; 125

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 4814

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 Ser Pro Trp Lys Phe Leu Arg Glu Cys Ser Asn Leu Cys Leu Thr Ile  
 35 40 45  
 Met Met Val Val Ser Trp Thr Ala Gly Gly Lys Ala Lys Pro Cys Gly  
 50 55 60  
 Arg Gly Gly Gly Leu Gln Arg Lys Ala Ala Ala Thr Thr Ala Ser Phe  
 65 70 75 80  
 Pro Thr His Ser His Trp Gln Thr Gly Gly Gln Val Gln Ser Pro Lys  
 85 90 95  
 Glu Thr Ala Ala Cys Ala Gly His Pro Pro Gly Thr Ala Phe Ser Leu  
 100 105 110  
 Ile Leu Pro Val Pro Pro Thr Cys Trp Val Ser Val Ala  
 115 120 125

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<211> 306

<212> PRT

<213> Homo sapiens

<400> 4812

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			20					25					30		
Lys	Val	Thr	Leu	Pro	Asn	Tyr	Asp	Asn	Val	Pro	Gly	Asn	Leu	Met	Leu
			35				40					45			
Ser	Ala	Leu	Gly	Leu	Arg	Leu	Gly	Asp	Arg	Val	Leu	Leu	Asp	Gly	Gln
			50				55				60				
Lys	Thr	Gly	Thr	Leu	Arg	Phe	Cys	Gly	Thr	Thr	Glu	Phe	Ala	Ser	Gly
					70					75				80	
Ser	Trp	Val	Gly	Val	Glu	Leu	Asp	Glu	Pro	Glu	Gly	Lys	Asn	Asp	Gly
			85					90						95	
Ser	Val	Gly	Gly	Val	Arg	Tyr	Phe	Ile	Cys	Pro	Pro	Lys	Gln	Gly	Leu
			100					105					110		
Phe	Ala	Ser	Val	Ser	Lys	Ile	Ser	Lys	Ala	Val	Asp	Ala	Pro	Pro	Ser
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Ser	Val	Thr	Ser	Thr	Pro	Gly	Pro	Pro	Arg	Met	Asp	Phe	Ser	Arg	Val
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Thr	Gly	Lys	Gly	Arg	Arg	Glu	His	Lys	Gly	Lys	Lys	Lys	Thr	Pro	Ser
				150					155					160	
Ser	Pro	Ser	Leu	Gly	Ser	Leu	Gln	Gln	Arg	Asp	Gly	Ala	Lys	Ala	Glu
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Val	Gly	Asp	Gln	Val	Leu	Val	Ala	Gly	Gln	Lys	Gln	Gly	Ile	Val	Arg
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Phe	Tyr	Gly	Lys	Thr	Asp	Phe	Ala	Pro	Gly	Tyr	Trp	Tyr	Gly	Ile	Glu
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Leu	Asp	Gln	Pro	Thr	Gly	Lys	His	Asp	Gly	Ser	Val	Phe	Gly	Val	Arg
			210				215				220				
Tyr	Phe	Thr	Cys	Pro	Pro	Arg	His	Gly	Val	Phe	Ala	Pro	Ala	Ser	Arg
				230					235					240	
Ile	Gln	Arg	Ile	Gly	Gly	Ser	Thr	Asp	Ser	Pro	Gly	Asp	Ser	Val	Gly

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Ser Ser Ser Pro Arg Lys Ser Arg Ser Trp Gln Gly Ser Gly Pro Met
65              70              75              80
Trp Pro Gly Pro Gly Tyr Phe Pro Asp Leu Thr Ser Pro Thr Ala Gln
      85              90              95
Pro Leu Gln Leu Leu Gly Ala Leu His Gly Cys Ser Phe Pro Pro Pro
      100              105              110
Leu Pro Ser Gly Gln Pro Cys Pro
      115              120

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&lt;210&gt; 4811

&lt;211&gt; 3207

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 4811

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<210> 4809  
 <211> 999  
 <212> DNA  
 <213> Homo sapiens

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<210> 4810  
 <211> 120  
 <212> PRT  
 <213> Homo sapiens

<400> 4810  
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 20 25 30  
 Ser Gln Pro Gly Cys His Ser Gly Leu Leu Thr Asn Thr Pro Ala Ala  
 35 40 45  
 Leu Val Pro Ala His Ala Arg Gln Arg Ser Gln Pro Ser Leu Leu Leu

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 ctccgtgtgc ccaagtggat tattgccctc tacactagca agttctaacc ctccgtgtct  
 1140  
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<210> 4808

<211> 313

<212> PRT

<213> Homo sapiens

<400> 4808

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Arg	Gly	Ile	Gly	Arg	Gly	Ile	Ala	Leu	Gln	Leu	Cys	Lys	Ala	Gly	Ala
			20					25						30	
Thr	Val	Tyr	Ile	Thr	Gly	Arg	His	Leu	Asp	Thr	Leu	Arg	Val	Val	Ala
		35					40					45			
Gln	Glu	Ala	Gln	Ser	Leu	Gly	Gln	Cys	Val	Pro	Val	Val	Cys	Asp	
	50					55				60					
Ser	Ser	Gln	Glu	Ser	Glu	Val	Arg	Ser	Leu	Phe	Glu	Gln	Val	Asp	Arg
65					70					75				80	
Glu	Gln	Gln	Gly	Arg	Leu	Asp	Val	Leu	Val	Asn	Asn	Ala	Tyr	Ala	Gly
				85					90					95	
Val	Gln	Thr	Ile	Leu	Asn	Thr	Arg	Asn	Lys	Ala	Phe	Trp	Glu	Thr	Pro
			100					105					110		
Ala	Ser	Met	Trp	Asp	Asp	Ile	Asn	Asn	Val	Gly	Leu	Arg	Gly	His	Tyr
		115					120					125			
Phe	Cys	Ser	Val	Tyr	Gly	Ala	Arg	Leu	Met	Val	Pro	Ala	Gly	Gln	Gly
	130					135					140				
Leu	Ile	Val	Val	Ile	Ser	Ser	Pro	Gly	Ser	Leu	Gln	Tyr	Met	Phe	Asn
145					150					155				160	
Val	Pro	Tyr	Gly	Val	Gly	Lys	Ala	Ala	Cys	Asp	Lys	Leu	Ala	Ala	Asp
				165					170					175	
Cys	Ala	His	Glu	Leu	Arg	Arg	His	Gly	Val	Ser	Cys	Val	Ser	Leu	Trp
			180					185					190		
Pro	Gly	Ile	Val	Gln	Thr	Glu	Leu	Leu	Lys	Glu	His	Met	Ala	Lys	Glu
		195					200					205			
Glu	Val	Leu	Gln	Asp	Pro	Val	Leu	Lys	Gln	Phe	Lys	Ser	Ala	Phe	Ser
	210					215					220				
Ser	Ala	Glu	Thr	Thr	Glu	Leu	Ser	Gly	Lys	Cys	Val	Val	Ala	Leu	Ala
225					230					235				240	
Thr	Asp	Pro	Asn	Ile	Leu	Ser	Leu	Ser	Gly	Lys	Val	Leu	Pro	Ser	Cys
			245						250					255	
Asp	Leu	Ala	Arg	Arg	Tyr	Gly	Leu	Arg	Asp	Val	Asp	Gly	Arg	Pro	Val
			260					265					270		
Gln	Asp	Tyr	Leu	Ser	Leu	Ser	Ser	Val	Leu	Ser	His	Val	Ser	Gly	Leu
		275					280					285			
Gly	Trp	Leu	Ala	Ser	Tyr	Leu	Pro	Ser	Phe	Leu	Arg	Val	Pro	Lys	Trp
	290					295					300				
Ile	Ile	Ala	Leu	Tyr	Thr	Ser	Lys	Phe							
305					310										

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 355 360 365  
 Ala Gln Ile Thr Asn Lys Cys Thr Glu Glu Asp Leu Glu Phe Tyr Val  
 370 375 380  
 Arg Lys Cys Gly Asp Ile Leu Gly Val Thr Ser Lys Leu Pro Lys Asp  
 385 390 395 400  
 Gln Gln Asp Ala Lys His Ile Leu Glu His Val Phe Phe Gln Val Val  
 405 410 415  
 Glu Phe Lys Lys Leu Asn Gln Glu His Asp Ile Asp Thr Ser Glu Thr  
 420 425 430  
 Ala Phe Gln Asn Asn Phe  
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&lt;210&gt; 4807

&lt;211&gt; 1177

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 4807

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 480  
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<210> 4806

<211> 438

<212> PRT

<213> Homo sapiens

<400> 4806

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 Arg Ser Asn Trp Lys Ile Gln Ser Leu Lys Asp Glu Ile Thr Ser Glu  
 35 40 45  
 Lys Leu Asn Gly Val Lys Leu Trp Ile Thr Ala Gly Pro Arg Glu Lys  
 50 55 60  
 Phe Thr Ala Ala Glu Phe Glu Ile Leu Lys Lys Tyr Leu Asp Thr Gly  
 65 70 75 80  
 Gly Asp Val Leu Val Met Leu Gly Glu Gly Gly Glu Ser Arg Phe Asp  
 85 90 95  
 Thr Asn Ile Asn Phe Leu Leu Glu Glu Tyr Gly Ile Met Val Asn Asn  
 100 105 110  
 Asp Ala Val Val Arg Asn Val Tyr His Lys Tyr Phe His Pro Lys Glu  
 115 120 125  
 Ala Leu Val Ser Ser Gly Val Leu Asn Arg Glu Ile Ser Arg Ala Ala  
 130 135 140  
 Gly Lys Ala Val Leu Ala Ile Ile Asp Glu Glu Ser Ser Gly Asn Asn  
 145 150 155 160  
 Ala Gln Ala Leu Thr Phe Val Tyr Pro Phe Gly Ala Thr Leu Ser Val  
 165 170 175  
 Met Lys Pro Ala Val Ala Val Leu Ser Thr Gly Ser Val Cys Phe Pro  
 180 185 190  
 Leu Asn Arg Pro Ile Leu Ala Phe Tyr His Ser Lys Asn Gln Gly Gly  
 195 200 205  
 Lys Leu Ala Val Leu Gly Ser Cys His Met Phe Ser Asp Gln Tyr Leu  
 210 215 220  
 Asp Lys Glu Glu Asn Ser Lys Ile Met Asp Val Val Phe Gln Trp  
 225 230 235 240  
 Leu Thr Thr Gly Asp Ile His Leu Asn Gln Ile Asp Ala Glu Asp Pro  
 245 250 255  
 Glu Ile Ser Asp Tyr Met Met Leu Pro Tyr Thr Ala Thr Leu Ser Lys  
 260 265 270  
 Arg Asn Arg Glu Cys Leu Gln Glu Ser Asp Glu Ile Pro Arg Asp Phe  
 275 280 285  
 Thr Thr Leu Phe Asp Leu Ser Ile Phe Gln Leu Asp Thr Thr Ser Phe  
 290 295 300  
 His Ser Val Ile Glu Ala His Glu Gln Leu Asn Val Lys His Glu Pro  
 305 310 315 320  
 Leu Gln Leu Ile Gln Pro Gln Phe Glu Thr Pro Leu Pro Thr Leu Gln  
 325 330 335  
 Pro Ala Val Phe Pro Pro Ser Phe Arg Glu Leu Pro Pro Pro Pro Leu

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 4805

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305          310          315          320
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          325          330          335
Ile Ser Leu Phe Tyr Ile Phe Asn Phe Leu Lys Tyr Thr Leu Trp Pro
          340          345          350
Cys Leu Val Leu Ala Leu Val Pro Trp Ala Val His Met Phe Ser Ala
          355          360          365
Gln Glu Ala Pro Pro Ile His Ser Ser
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<210> 4803  
 <211> 564  
 <212> DNA  
 <213> Homo sapiens

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<400> 4803
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<210> 4804  
 <211> 53  
 <212> PRT  
 <213> Homo sapiens

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<400> 4804
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Gln Gly Ala Ile Glu Lys Val Lys Glu Ser Asp Lys Leu Val Ala Thr
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Ser Lys Ile Thr Leu Gln Asp Lys Gln Asn Met Val Lys Arg Val Ser
          35          40          45
Ile Met Ser Tyr Ala
50

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<210> 4805  
 <211> 1619

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<210> 4802

<211> 377

<212> PRT

<213> Homo sapiens

<400> 4802

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Arg	Pro	Gly	Ala	Ser	Arg	Gly	Leu	Val	Gly	Ser	Trp	Ala	Ala	Met	Glu
		20					25					30			
Ser	Thr	Leu	Gly	Ala	Gly	Ile	Val	Ile	Ala	Glu	Ala	Leu	Gln	Asn	Gln
	35					40					45				
Leu	Ala	Trp	Leu	Glu	Asn	Val	Trp	Leu	Trp	Ile	Thr	Phe	Leu	Gly	Asp
	50				55					60					
Pro	Lys	Ile	Leu	Phe	Leu	Phe	Tyr	Phe	Pro	Ala	Ala	Tyr	Tyr	Ala	Ser
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					Gly
					Ser
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&lt;210&gt; 4801

&lt;211&gt; 1447

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 4801

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Asp Ser Lys Asp Gln Ser Asp Lys His Asp Arg Arg Arg Ser Gln Ser
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 <213> Homo sapiens

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Pro Pro Cys Gly His Arg Gly Ala Leu Asp Gln Pro His His Arg Val
      35      40      45
Ala Gln Pro His Leu Gln Val Val Arg Gln Arg Ser Pro Pro Ala Ser
      50      55      60
Trp Ser Pro Pro Pro Arg Ala Leu Ser His Val Phe Leu Phe Gly Asp
      65      70      75      80
Arg Pro Phe Trp Trp Val His Glu Ser Gly Tyr Tyr Ser Gln Ala Pro

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<210> 4798

<211> 401

<212> PRT

<213> Homo sapiens

<400> 4798

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Phe	Glu	Ser	Phe	Leu	Asp	Asp	Glu	Glu	Asp	Leu	Asp	Val	Lys	Ala	Gly
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Ser	Phe	Asp	Arg	Glu	Leu	Glu	Arg	Glu	Lys	Glu	Arg	Gln	Arg	Leu	Glu
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Ser	Arg	Ser	Arg	Ser	Arg	Asp	Arg	Lys	Gly	Asp	Arg	Arg	Asp	Arg	Asp
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Tyr	Asp	Lys	Glu	Arg	Gly	Asn	Glu	Arg	Glu	Lys	Glu	Arg	Glu	Arg	Ser
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3978

&lt;213&gt; Homo sapiens

&lt;400&gt; 4796

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 Val Pro Gly Leu Ser Ile Pro Thr Ser Ser Trp Leu Pro Leu Met Lys  
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 Gly Pro Pro Glu Val Ala Gln Ser Asn Ile Gln Thr Gln Pro Val Asn  
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 Arg Glu Met Asp Ala Ala Gly Phe Asp Phe Ser Leu Pro Cys Thr Gln  
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 Lys Leu Thr Gln Asn Gly Thr Arg Ser Gln Trp Gly Leu Ser Leu Pro  
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 Cys Thr Leu Leu Pro Leu Ala Gly Pro His Ala Gln Ala Pro Gln Gly  
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 Val Ala Pro Lys Val Thr Thr Arg Gly Leu Gly Pro Ala Gly Ala Ser  
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 Leu Trp Thr Val Tyr Glu Asp Ser Lys Arg Gln Gly Leu Ser Leu Glu  
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&lt;211&gt; 541

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<213> Homo sapiens

<400> 4794

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Thr	Ser	Ser	Val	Ala	Gly	Arg	Gln	Pro	Gly	Ala	Phe	Ser	Glu	Glu	Lys
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<212> DNA

<213> Homo sapiens

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Gln Ile Tyr

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 <212> DNA  
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 4481

&lt;210&gt; 4792

&lt;211&gt; 179

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 4792

Tyr	Cys	Tyr	Lys	Ser	Arg	His	Leu	Ser	Gln	Trp	Asn	Arg	Ile	Glu	His
1				5					10					15	
Ser	Lys	Ile	Lys	Leu	His	Thr	Tyr	His	His	Leu	Ile	Val	Asp	Lys	Ala
			20					25					30		
Asn	Lys	Asn	Lys	Gln	Trp	Gly	Lys	Gly	Thr	Leu	Phe	Asn	Lys	Trp	Cys
		35				40					45				
Trp	Asp	Asn	Ser	Leu	Ala	Ile	Cys	Arg	Ile	Val	Lys	Leu	Asp	Pro	Tyr
	50				55					60					
Pro	Ser	Arg	Tyr	Thr	Lys	Ile	Asn	Ser	Arg	Trp	Ile	Lys	Asp	Leu	Asn
65				70					75					80	
Ile	Lys	Pro	Lys	Ser	Ile	Lys	Phe	Leu	Glu	Asp	Asn	Pro	Gly	Asn	Ala
			85					90						95	
Ile	Leu	Asp	Ile	Ser	Ala	Gly	Lys	Asp	Leu	Met	Met	Asn	Thr	Xaa	Lys
		100				105						110			
Ala	Ile	Thr	Thr	Lys	Thr	Lys	Ile	Asp	Lys	Trp	Asp	Leu	Ile	Lys	Leu
	115					120						125			
Asn	Asn	Phe	Cys	Thr	Ala	Lys	Glu	Thr	Ile	Asn	Arg	Val	Asp	Arg	Gln

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1920  
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1980

&lt;213&gt; Homo sapiens

&lt;400&gt; 4790

```

Met Ile Phe Gly Asp Leu Met Arg Phe Cys Trp Leu Met Ala Val Val
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Ile Leu Gly Phe Ala Ser Ala Phe Tyr Ile Ile Phe Gln Thr Glu Asp
 20      25      30
Pro Glu Glu Leu Gly His Phe Tyr Asp Tyr Pro Met Ala Leu Phe Ser
 35      40      45
Thr Phe Glu Leu Phe Leu Thr Ile Ile Asp Gly Pro Ala Asn Tyr Asn
 50      55      60
Val Asp Leu Pro Phe Met Tyr Ser Ile Thr Tyr Ala Ala Phe Ala Ile
 65      70      75      80
Ile Ala Thr Leu Leu Met Leu Asn Leu Leu Ile Ala Met Met Gly Asp
 85      90      95
Thr His Trp Arg Val Ala His Glu Arg Asp Glu Leu Trp Arg Ala Gln
100      105      110
Ile Val Ala Thr Thr Val Met Leu Glu Arg Lys Leu Pro Arg Cys Leu
115      120      125
Trp Pro Arg Ser Gly Ile Cys Gly Arg Glu Tyr Gly Leu Gly Asp Arg
130      135      140
Trp Phe Leu Arg Val Glu Asp Arg Gln Asp Leu Asn Arg Gln Arg Ile
145      150      155      160
Gln Arg Tyr Ala Gln Ala Phe His Thr Arg Gly Ser Glu Asp Leu Asp
165      170      175
Lys Asp Ser Val Glu Lys Leu Glu Leu Gly Cys Pro Phe Ser Pro His
180      185      190
Leu Ser Leu Pro Met Pro Ser Val Ser Arg Ser Thr Ser Arg Ser Ser
195      200      205
Ala Asn Trp Glu Arg Leu Arg Gln Gly Thr Leu Arg Arg Asp Leu Arg
210      215      220
Gly Ile Ile Asn Arg Gly Leu Glu Asp Gly Glu Ser Trp Glu Tyr Gln
225      230      235      240
Ile

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&lt;210&gt; 4791

&lt;211&gt; 4481

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 4791

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aaaaaaaaaa aaccc  
1515

&lt;210&gt; 4790

&lt;211&gt; 241

&lt;212&gt; PRT

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 1020  
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 1200  
 aacaataaac acgtttccca ctctgaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaa  
 1258

&lt;210&gt; 4788

&lt;211&gt; 197

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 4788

Met	Leu	Val	Leu	Pro	Ser	Pro	Cys	Pro	Gln	Pro	Leu	Ala	Phe	Ser	Ser
1			5					10						15	
Val	Glu	Thr	Met	Glu	Gly	Pro	Pro	Arg	Arg	Thr	Cys	Arg	Ser	Pro	Glu
		20						25				30			
Pro	Gly	Pro	Ser	Ser	Ser	Ile	Gly	Ser	Pro	Gln	Ala	Ser	Ser	Pro	Pro
		35				40					45				
Arg	Pro	Asn	His	Tyr	Leu	Leu	Ile	Asp	Thr	Gln	Gly	Val	Pro	Tyr	Thr
		50			55					60					
Val	Leu	Val	Asp	Glu	Glu	Ser	Gln	Arg	Glu	Pro	Gly	Ala	Ser	Gly	Ala
65				70					75					80	
Pro	Gly	Gln	Lys	Lys	Cys	Tyr	Ser	Cys	Pro	Val	Cys	Ser	Arg	Val	Phe
			85					90					95		
Glu	Tyr	Met	Ser	Tyr	Leu	Gln	Arg	His	Ser	Ile	Thr	His	Ser	Glu	Val
		100					105					110			
Lys	Pro	Phe	Glu	Cys	Asp	Ile	Cys	Gly	Lys	Ala	Phe	Lys	Arg	Ala	Ser
		115				120					125				
His	Leu	Ala	Arg	His	His	Ser	Ile	His	Leu	Ala	Gly	Gly	Gly	Arg	Pro
		130				135					140				
His	Gly	Cys	Pro	Leu	Cys	Pro	Arg	Arg	Phe	Arg	Asp	Ala	Gly	Glu	Leu
145				150					155					160	
Ala	Gln	His	Ser	Arg	Val	His	Ser	Gly	Glu	Arg	Pro	Phe	Gln	Cys	Pro
			165					170					175		
His	Cys	Pro	Arg	Arg	Phe	Met	Glu	Gln	Asn	Thr	Leu	Gln	Lys	His	Thr
		180					185						190		
Arg	Trp	Lys	His	Pro											
		195													

&lt;210&gt; 4789

&lt;211&gt; 1515

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 4789

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195	200	205
Ile Thr Glu Glu Thr Leu His Ser Arg Phe Leu Glu Gly Val Arg Asn		
210	215	220
Val Ala Ser Val Cys Leu Gln Ile Gly Tyr Pro Thr Val Ala Ser Val		
225	230	235
Pro His Ser Ile Ile Asn Gly Tyr Lys Arg Val Leu Ala Leu Ser Val		240
	245	250
Glu Thr Asp Tyr Thr Phe Pro Leu Ala Glu Lys Val Lys Ala Phe Leu		255
	260	265
Ala Asp Pro Ser Ala Phe Val Ala Ala Ala Pro Val Ala Ala Ala Thr		270
	275	280
Thr Ala Ala Pro Ala Ala Ala Ala Ala Ala Pro Ala Lys Val Glu		285
	290	295
Ala Lys Glu Glu Ser Glu Glu Ser Asp Glu Asp Met Gly Phe Gly Leu		300
305	310	315
Phe Asp		320

&lt;210&gt; 4787

&lt;211&gt; 1258

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 4787

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 900



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 3289

&lt;210&gt; 4786

&lt;211&gt; 322

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 4786

Met	Pro	Arg	Glu	Asp	Arg	Ala	Thr	Trp	Lys	Ser	Asn	Tyr	Phe	Leu	Lys
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Ile	Ile	Val	Ser	Ala	Gln	Leu	Leu	Asp	Asp	Tyr	Pro	Lys	Cys	Phe	Ile
		20						25					30		
Val	Gly	Ala	Asp	Asn	Val	Gly	Ser	Lys	Gln	Met	Gln	Gln	Ile	Arg	Met
	35					40					45				
Ser	Leu	Arg	Gly	Lys	Ala	Val	Val	Leu	Met	Gly	Lys	Asn	Thr	Met	Met
	50				55					60					
Arg	Lys	Ala	Ile	Arg	Gly	His	Leu	Glu	Asn	Asn	Pro	Ala	Leu	Glu	Lys
65				70					75					80	
Leu	Leu	Pro	His	Ile	Arg	Gly	Asn	Val	Gly	Phe	Val	Phe	Thr	Lys	Glu
		85					90						95		
Asp	Leu	Thr	Glu	Ile	Arg	Asp	Met	Leu	Leu	Ala	Asn	Lys	Val	Pro	Ala
	100						105						110		
Ala	Ala	Arg	Ala	Gly	Ala	Ile	Ala	Pro	Cys	Glu	Val	Thr	Val	Pro	Ala
	115					120						125			
Gln	Asn	Thr	Gly	Leu	Gly	Pro	Glu	Lys	Thr	Ser	Phe	Phe	Gln	Ala	Leu
	130					135					140				
Gly	Ile	Thr	Thr	Lys	Ile	Ser	Arg	Gly	Thr	Ile	Glu	Ile	Leu	Ser	Asp
145				150					155					160	
Val	Gln	Leu	Ile	Lys	Thr	Gly	Asp	Lys	Val	Gly	Ala	Ser	Glu	Ala	Thr
		165					170						175		
Leu	Leu	Asn	Met	Leu	Asn	Ile	Ser	Pro	Phe	Ser	Phe	Gly	Leu	Val	Ile
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Leu Ser His Met Gly Ser Leu Arg Ser Leu Asn Leu Arg Ser Cys Asp
      165              170              175
Asn Ile Ser Asp Thr Gly Ile Met His Leu Ala Met Gly Ser Leu Arg
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Leu Ser Gly Leu Asp Val Ser Phe Cys Asp Lys Val Gly Asp Gln Ser
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Leu Ala Tyr Ile
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&lt;210&gt; 4785

&lt;211&gt; 3289

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 4785

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&lt;210&gt; 4784

&lt;211&gt; 212

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 4784

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&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 4780

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					Phe
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&lt;210&gt; 4779

&lt;211&gt; 4467

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 4779

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&lt;210&gt; 4778

&lt;211&gt; 144

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 4778

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			20					25					30		
Arg	Ala	Glu	Asn	Arg	Glu	Leu	Gly	Lys	Arg	Val	Gln	Ala	Leu	Gln	Glu
		35				40					45				
Glu	Ser	Arg	Tyr	Leu	Arg	Ala	Val	Leu	Ala	Asn	Glu	Thr	Gly	Leu	Ala
	50				55					60					
Arg	Leu	Leu	Ser	Arg	Leu	Ser	Gly	Val	Gly	Leu	Arg	Leu	Thr	Thr	Ser
65				70					75					80	
Leu	Phe	Arg	Asp	Ser	Pro	Ala	Gly	Asp	His	Asp	Tyr	Ala	Leu	Pro	Val
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Gly	Lys	Gln	Lys	Gln	Asp	Leu	Leu	Glu	Glu	Asp	Asp	Ser	Ala	Gly	Gly
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<212> DNA
<213> Homo sapiens
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3954

<213> Homo sapiens

<400> 4774

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Pro Asn Pro Ser Ser Leu Phe Pro Pro Ser Pro Gln Ala Arg Ala Ala
             35             40             45
Met Gly Trp Arg Val Leu Ala Trp Thr Gln His Pro Ile Ser Ser Ala
             50             55             60
Leu Ser Leu Asp Pro Ala Ser His Leu Leu Ser Ser Gln Gly Gly Gly
65             70             75             80
Ser Trp Glu Pro His Pro Gln Pro Leu His Ala
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<210> 4775

<211> 433

<212> DNA

<213> Homo sapiens

<400> 4775

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<210> 4776

<211> 97

<212> PRT

<213> Homo sapiens

<400> 4776

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             20             25             30
Leu Trp Leu His Cys Pro Pro Cys Tyr Phe Phe Glu Arg Ala Asn His
             35             40             45
Thr Ala Thr Ser Leu Pro Leu His Leu Leu Ser Leu Leu Leu Leu Thr
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 Ile Ala Thr Arg Gly Val Val Gln Leu Phe Asn Ala Val Gln Lys His  
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 Gln Lys Asn Val Asp Glu Lys Val Lys Glu Ala Gly Ser Ser Met Arg  
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 Lys Arg Ala Lys Leu Ile Ser Thr Val Ser Lys Lys Asp Phe Ile Ser  
 100 105 110  
 Val Leu Arg Gly Met Asp Gly Ser Thr Asn Glu Thr Ala Ser Ser Arg  
 115 120 125  
 Lys Lys Pro Lys Ala Lys Gln Thr Glu Val Lys Ser Glu Glu Gly Pro  
 130 135 140  
 Gly Trp Thr Ile Leu Arg Asp Asp Phe Met Met Gly Ala Ser Met Lys  
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 Ala Ser Asp Ser Asp Thr  
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<210> 4773  
 <211> 319  
 <212> DNA  
 <213> Homo sapiens

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<210> 4774  
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2653



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		180		185		190									
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		195		200		205									
Pro	Arg	Gly	His	Leu	Thr	Ser	Leu	Gln	Asp	Ala	Met	Cys	Glu	Thr	Met
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&lt;210&gt; 4771

&lt;211&gt; 2653

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 4771

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<211> 237

<212> PRT

<213> Homo sapiens

<400> 4770

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Phe	Leu	Lys	Ala	Gln	Val	Leu	Pro	Pro	Leu	Arg	Asp	Val	Arg	Thr	Arg
	50					55					60				
Pro	Glu	Val	Gly	Asp	Leu	Leu	Arg	Asn	Lys	Leu	Val	Arg	Leu	Met	Thr
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His	Leu	Asp	Thr	Asp	Val	Lys	Arg	Val	Ala	Ala	Glu	Phe	Leu	Phe	Val
		85						90					95		
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		100						105					110		
Asn	Ala	Ala	Gly	Leu	Leu	Ala	Ala	Arg	Gly	Leu	Met	Ala	Gly	Gly	Arg
	115						120					125			
Pro	Glu	Gly	Gln	Tyr	Ser	Glu	Asp	Glu	Asp	Thr	Asp	Thr	Asp	Glu	Tyr
	130					135					140				
Lys	Glu	Ala	Lys	Ala	Ser	Ile	Asn	Pro	Val	Thr	Gly	Arg	Val	Glu	Glu

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 Lys Ala Gln Leu Glu Gln Ser Val Glu Glu Asn Lys Glu Arg Met Glu  
 355 360 365  
 Lys Leu Glu Gly Tyr Trp Gly Glu Ala Gln Ser Leu Cys Gln Ala Val  
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 405 410 415  
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&lt;210&gt; 4769

&lt;211&gt; 1533

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 4769

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<210> 4768

<211> 460

<212> PRT

<213> Homo sapiens

<400> 4768

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Asp	Phe	Ser	Glu	Ala	Asp	Leu	Val	Asp	Val	Ser	Ala	Tyr	Ser	Gly	Leu	35	40	45	
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Ile	Pro	Gly	Leu	Ser	Glu	Glu	Glu	Asp	Pro	Ala	Pro	Ser	Arg	Lys	Ile	85	90	95	
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Asp	Tyr	Asp	Arg	Arg	Asn	Glu	Asp	Val	Asp	Pro	Met	Ala	Ala	Ser	Ala	115	120	125	
Glu	Tyr	Glu	Leu	Glu	Lys	Arg	Val	Glu	Arg	Leu	Glu	Leu	Phe	Pro	Val	130	135	140	
Glu	Leu	Glu	Lys	Asp	Ser	Glu	Gly	Leu	Gly	Ile	Ser	Ile	Ile	Gly	Met	145	150	155	160
Gly	Ala	Gly	Ala	Asp	Met	Gly	Leu	Glu	Lys	Leu	Gly	Ile	Phe	Val	Lys	165	170	175	
Thr	Val	Thr	Glu	Gly	Gly	Ala	Ala	His	Arg	Asp	Gly	Arg	Ile	Gln	Val	180	185	190	
Asn	Asp	Leu	Leu	Val	Glu	Val	Asp	Gly	Thr	Ser	Leu	Val	Gly	Val	Thr	195	200	205	
Gln	Ser	Phe	Ala	Ala	Ser	Val	Leu	Arg	Asn	Thr	Lys	Gly	Arg	Val	Arg	210	215	220	
Phe	Met	Ile	Gly	Arg	Glu	Arg	Pro	Gly	Glu	Gln	Ser	Glu	Val	Ala	Gln	225	230	235	240
Leu	Ile	Gln	Gln	Thr	Leu	Glu	Gln	Glu	Arg	Trp	Gln	Arg	Glu	Met	Met	245	250	255	
Glu	Gln	Arg	Tyr	Ala	Gln	Tyr	Gly	Glu	Asp	Asp	Glu	Glu	Thr	Gly	Glu	260	265	270	
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<210> 4767
<211> 1380
<212> DNA
<213> Homo sapiens
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&lt;210&gt; 4766

&lt;211&gt; 280

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 4766

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Pro	Glu	Pro	Arg	Arg	Thr	Glu	His	Arg	Ala	Pro	Ser	Ser	Thr	Trp	Arg
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Pro	Val	Ala	Leu	Thr	Leu	Leu	Thr	Leu	Cys	Leu	Val	Leu	Leu	Ile	Gly
	50				55					60					
Leu	Ala	Ala	Leu	Gly	Leu	Leu	Phe	Phe	Gln	Tyr	Tyr	Gln	Leu	Ser	Asn
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Thr	Gly	Gln	Asp	Thr	Ile	Ser	Gln	Met	Glu	Glu	Arg	Leu	Gly	Asn	Thr
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Ser	Gln	Glu	Leu	Gln	Ser	Leu	Gln	Val	Gln	Asn	Ile	Lys	Leu	Ala	Gly
			100				105					110			
Ser	Leu	Gln	His	Val	Ala	Glu	Lys	Leu	Cys	Arg	Glu	Leu	Tyr	Asn	Lys
		115				120					125				
Ala	Gly	Ala	His	Arg	Cys	Ser	Pro	Cys	Thr	Glu	Gln	Trp	Lys	Trp	His
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Gly	Asp	Asn	Cys	Tyr	Gln	Phe	Tyr	Lys	Asp	Ser	Lys	Ser	Trp	Glu	Asp
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Cys	Lys	Tyr	Phe	Cys	Leu	Ser	Glu	Asn	Ser	Thr	Met	Leu	Lys	Ile	Asn
			165				170						175		
Lys	Gln	Glu	Asp	Leu	Glu	Phe	Ala	Ala	Ser	Gln	Ser	Tyr	Ser	Glu	Phe

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Glu Asp Gln Glu Glu Lys Lys Lys Asp Ser Lys Lys Ser Lys Ala Asn		640
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Leu Leu Glu Arg Arg Ser Thr Arg Thr Arg Lys Cys Ile Ser Tyr Arg		655
	660	665
Phe Asp Glu Phe Asp Glu Ala Ile Asp Glu Ala Ile Glu Asp Asp Ile		670
	675	680
Lys Glu Ala Asp Gly Gly Gly Val Gly Arg Gly Lys Asp Ile Ser Thr		685
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Ile Thr Gly His Arg Gly Lys Asp Ile Ser Thr Ile Leu Asp Glu		
705	710	715

&lt;210&gt; 4765

&lt;211&gt; 1707

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 4765

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 Ser Lys Val Ser Lys Val Lys Pro Xaa Lys Ala Lys Phe Asp Gly Leu  
 485 490 495  
 Val Leu Gly His Val Ala Asp Gly Asn Ile Pro Ala Met Met Lys Val  
 500 505 510  
 Lys Gly Leu Ala Val Lys Asn His Leu Gln Leu Gln Lys Arg Arg Lys  
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 Lys Arg Lys Val Lys Lys Pro Ser Xaa Ala Asp Asp Glu Pro Cys  
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 Lys Lys Cys Gly Leu Pro Asn His Pro Glu Leu Ile Leu Leu Cys Asp  
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 Ser Cys Asp Ser Gly Tyr His Thr Ala Cys Leu Arg Pro Pro Leu Met  
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&lt;211&gt; 719

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 4764

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Leu	Lys	Lys	Arg	Glu	Ile	Lys	Leu	Ser	Asp	Asp	Phe	Asp	Ser	Pro	Val
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Lys	Gly	Pro	Leu	Cys	Lys	Ser	Val	Thr	Pro	Thr	Lys	Glu	Phe	Leu	Lys
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Asp	Glu	Ile	Lys	Gln	Glu	Glu	Glu	Thr	Cys	Lys	Arg	Ile	Ser	Thr	Ile
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Thr	Ala	Leu	Gly	His	Glu	Gly	Lys	Gln	Leu	Val	Asn	Gly	Glu	Val	Ser
			85					90					95		
Asp	Glu	Arg	Val	Ala	Pro	Asn	Phe	Lys	Thr	Glu	Pro	Ile	Glu	Thr	Lys
	100							105					110		
Phe	Tyr	Glu	Thr	Lys	Glu	Glu	Ser	Tyr	Ser	Pro	Ser	Lys	Asp	Arg	Asn
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Ile	Ile	Thr	Glu	Gly	Asn	Gly	Thr	Glu	Ser	Leu	Asn	Ser	Val	Ile	Thr
	130				135					140					
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&lt;210&gt; 4763

&lt;211&gt; 2158

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 4763

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<211> 251

<212> PRT

<213> Homo sapiens

<400> 4762

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			20					25					30		
Lys	Gly	Trp	Pro	Pro	Lys	Tyr	Ser	Thr	Trp	Glu	Pro	Glu	Glu	His	Ile
		35					40					45			
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65					70					75				80	
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			85					90					95		
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			100					105					110		
Ser	Pro	Glu	Gly	Val	Val	Lys	Ala	Gly	Ala	Pro	Glu	Leu	Val	Asp	Lys
		115				120						125			
Gly	Pro	Leu	Val	Pro	Thr	Leu	Pro	Phe	Pro	Leu	Arg	Lys	Pro	Arg	Lys
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Ala	Gln	Pro	Pro	Glu	Glu	Glu	Ala	Asp	Ala	Asp	Leu	Ala	Glu	Gly	Pro
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&lt;210&gt; 4760

&lt;211&gt; 78

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 4760

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			20					25					30		
Lys	Gly	Gln	Thr	Lys	Thr	Leu	Phe	Glu	Phe	Ser	Ser	Ser	Arg	Ala	Gly
		35					40					45			
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&lt;210&gt; 4761

&lt;211&gt; 3973

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 4761

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<211> 90

<212> PRT

<213> Homo sapiens

<400> 4758

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Leu	Ala	Ala	Gly	Asp	Val	Asp	Gly	Asp	Val	Phe	Val	Phe	Ser	Tyr	Ser
		35				40				45					
Cys	Gln	Glu	Gly	Glu	Thr	Lys	Glu	Leu	Val	Ile	Arg	Ser	His	Leu	Lys
	50					55				60					
Ala	Cys	Arg	Ala	Val	Ala	Phe	Ser	Glu	Asp	Gly	Gln	Lys	Leu	Ile	Thr
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Val	Ser	Lys	Asp	Lys	Ala	Ile	His	Val	Leu						
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<210> 4759

<211> 1087

<212> DNA

<213> Homo sapiens

<400> 4759

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<211> 188

<212> PRT

<213> Homo sapiens

<400> 4756

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Ser	Glu	Asp	Gly	Thr	Leu	Arg	Ser	Leu	Glu	Pro	Glu	Pro	Gln	Gln	Ser
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			85					90					95		
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		100					105					110			
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<210> 4757

<211> 272

<212> DNA

<213> Homo sapiens

<400> 4757

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&lt;211&gt; 748

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 4754

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<212> DNA
<213> Homo sapiens
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&lt;210&gt; 4752

&lt;211&gt; 335

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 4752

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Ser	Leu	Trp	Pro	Arg	Ile	Thr	Phe	Leu	Leu	Pro	Pro	Ala	Pro	Pro	Pro
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Arg	Val	Val	Asn	Gly	Gln	Thr	Ala	Thr	Ile	Ala	Lys	Thr	Phe	Pro	Met



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&lt;211&gt; 276

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 4750

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 35           40           45
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Thr Pro Ser Phe Leu Ile Ala Cys Asn Lys Gln Asp Ile Ala Met Ala
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Lys Ser Ala Lys Leu Ile Gln Gln Gln Leu Glu Lys Glu Leu Asn Thr
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&lt;210&gt; 4751

&lt;211&gt; 2777

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 4751

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&lt;210&gt; 4750

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&lt;210&gt; 4748

&lt;211&gt; 273

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 4748

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 35 40 45  
 Cys Glu Gln Asn Leu Leu Ser Arg Pro Asp Gly Ser Ala Ser Phe Leu  
 50 55 60  
 Gln Gly Asp Thr Ser Val Leu Ala Gly Val Tyr Gly Pro Ala Glu Val  
 65 70 75 80  
 Lys Val Ser Lys Glu Ile Phe Asn Lys Ala Thr Leu Glu Val Ile Leu

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<211> 221

<212> PRT

<213> Homo sapiens

<400> 4746

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Ser	Ala	Gly	Ile	Gln	Arg	Ala	Gln	Ile	Gln	Lys	Glu	Leu	Trp	Arg	Ile
	35					40					45				
Gln	Asp	Val	Met	Glu	Gly	Leu	Ser	Lys	His	Lys	Gln	Gln	Arg	Gly	Thr
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Thr	Glu	Ile	Gly	Met	Ile	Gly	Ser	Lys	Pro	Phe	Ser	Thr	Val	Lys	Tyr
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		85						90					95		
Thr	Thr	Val	Ala	Glu	Val	Asp	Glu	Ser	Asn	Gly	Glu	Glu	Lys	Ser	Glu
		100					105						110		
Pro	Val	Ser	Glu	Ile	Glu	Thr	Ser	Val	Val	Lys	Gly	Ser	His	Phe	Pro
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Val	Gly	Val	Val	Pro	Pro	Arg	Ala	Lys	Ser	Pro	Thr	Pro	Glu	Ser	Ser
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Thr	Ile	Ala	Ser	Tyr	Val	Thr	Leu	Arg	Lys	Thr	Lys	Lys	Met	Met	Asp
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			165					170					175		
Glu	Ser	Thr	Arg	Pro	Arg	Met	Thr	Val	Glu	Glu	Gln	Met	Glu	Arg	Ile
		180				185						190			
Arg	Arg	Tyr	Gln	Gln	Ala	Cys	Leu	Arg	Glu	Lys	Lys	Lys	Gly	Leu	Asn
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<211> 1091

<212> DNA

<213> Homo sapiens

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 35 40 45  
 Lys Ala Pro Ala Gly Asp Gly Ser Gln Thr Arg Gly Lys Met Ser Glu  
 50 55 60  
 Gly Gly Arg Lys Ser Ser Leu Leu Gln Lys Ser Lys Ala Asp Ser Ser  
 65 70 75 80  
 Gly Val Gly Lys Gly Asp Leu Gln Ser Thr Leu Leu Glu Gly His Gly  
 85 90 95  
 Thr Ala Pro Pro Asp Leu Asp Leu Ser Ala Ile Asn Asp Lys Ser Ile  
 100 105 110  
 Val Lys Lys Thr Pro Gln Leu Ala Lys Thr Ile Ser Lys Lys Pro Glu  
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 130 135 140  
 Ala Asn Gly Met Met Glu  
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<210> 4742  
 <211> 109  
 <212> PRT  
 <213> Homo sapiens

<400> 4742  
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 20 25 30  
 Pro Glu Gly Gly Val Ser Lys Phe Ser Pro Pro Lys Asn Gln Ile Leu  
 35 40 45  
 Ser Phe Ile Pro Pro Pro Phe Pro Pro Phe Gly Phe Phe Lys Lys Phe  
 50 55 60  
 Pro Ser Phe Phe Arg Lys Gly Lys Gly Gly Glu Arg Gly Gly Gln Arg  
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 <211> 473  
 <212> DNA  
 <213> Homo sapiens

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 300



&lt;400&gt; 4739

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 684

&lt;210&gt; 4740

&lt;211&gt; 119

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 4740

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 Pro Ala Val Thr Gln Leu Ser His Leu Arg Gly Ser Leu Asp Ala Ala  
 20 25 30  
 Trp Leu Ser Asp Lys Asp Lys Glu Lys Ile Gln Met Ser Thr Arg Ala  
 35 40 45  
 Val His Ile Leu Trp Val Ser Trp Glu Gln Gly Trp Ala Val Pro Glu  
 50 55 60  
 Ala Pro Ser Gln Pro Ala Pro Gln Ala Ala Asn Gly Ser Leu Leu Leu  
 65 70 75 80  
 Gly Gln Gly Ile Cys Gly Gln Glu Ser Thr Leu Val Arg Arg Arg Leu  
 85 90 95  
 Ala Ser Asn Thr Gln Pro Cys Leu Arg Ala Pro Ala Val Glu Gly Ser  
 100 105 110  
 Gly Arg Val Gln Gly Ala Asp  
 115

&lt;210&gt; 4741

&lt;211&gt; 411

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

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      405              410              415
Leu Glu Thr Thr Met Ala Lys Val Glu Gly Ala Ala Ala Gln Leu Pro
      420              425              430
Ser Leu Asn Asn Arg Leu Ser Tyr Ala Val Arg Lys Val His Thr Ile
      435              440              445
Arg Gly Leu Ile Ala Arg Lys Leu Ala Leu Ala Gln Leu Arg Gln Glu
      450              455              460
Ser Cys Pro Leu Pro Pro Pro Val Thr Asp Val Ser Leu Glu Leu Gln
465              470              475              480
Gln Leu Arg Glu Glu Arg Asn Arg Leu Asp Ala Glu Leu Gln Leu Ser
      485              490              495
Ala Arg Leu Ile Gln Gln Glu Val Gly Arg Ala Arg Glu Gln Gly Glu
      500              505              510
Ala Glu Arg Gln Gln Leu Ser Lys Val Ala Gln Gln Leu Glu Gln Glu
      515              520              525
Leu Gln Gln Thr Gln Glu Ser Leu Ala Ser Leu Gly Leu Gln Leu Glu
      530              535              540
Val Ala Arg Gln Gly Gln Gln Glu Ser Thr Glu Glu Ala Ala Ser Leu
545              550              555              560
Arg Gln Glu Leu Thr Gln Gln Gln Glu Leu Tyr Gly Gln Ala Leu Gln
      565              570              575
Glu Lys Val Ala Glu Val Glu Thr Arg Leu Arg Glu Gln Leu Ser Asp
      580              585              590
Thr Glu Arg Arg Leu Asn Glu Ala Arg Arg Glu His Ala Lys Ala Val
      595              600              605
Val Ser Leu Arg Gln Ile Gln Arg Arg Ala Ala Gln Glu Lys Glu Arg
      610              615              620
Ser Gln Glu Leu Arg Arg Leu Gln Glu Glu Ala Arg Lys Glu Glu Gly
625              630              635              640
Gln Arg Leu Ala Arg Arg Leu Gln Glu Leu Glu Arg Asp Lys Asn Leu
      645              650              655
Met Leu Ala Thr Leu Gln Gln Glu Gly Leu Leu Ser Arg Tyr Lys Gln
      660              665              670
Gln Arg Leu Leu Thr Val Leu Pro Ser Leu Leu Asp Lys Lys Lys Ser
      675              680              685
Val Val Ser Ser Pro Arg Pro Pro Glu Cys Ser Ala Ser Ala Pro Val
      690              695              700
Ala Ala Ala Val Pro Thr Arg Glu Ser Ile Lys Gly Ser Leu Ser Val
705              710              715              720
Leu Leu Asp Asp Leu Gln Asp Leu Ser Glu Ala Ile Ser Lys Glu Glu
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Ala Val Cys Gln Gly Asp Asn Leu Asp Arg Cys Ser Ser Ser Asn Pro
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Gln Met Ser Ser
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&lt;210&gt; 4739

&lt;211&gt; 684

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

<210> 4738  
 <211> 756  
 <212> PRT  
 <213> Homo sapiens

<400> 4738

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Thr Met Trp Glu Arg Asp Val Ser Ser Asp Arg Gln Glu Pro Gly Arg
 35           40           45
Arg Gly Arg Ser Trp Gly Leu Glu Gly Ser Gln Ala Leu Ser Gln Gln
 50           55           60
Ala Glu Val Ile Val Arg Gln Leu Gln Glu Leu Arg Arg Leu Glu Glu
 65           70           75           80
Glu Val Arg Leu Leu Arg Glu Thr Ser Leu Gln Gln Lys Met Arg Leu
 85           90           95
Glu Ala Gln Ala Met Glu Leu Glu Ala Leu Ala Arg Ala Glu Lys Ala
 100          105          110
Gly Arg Ala Glu Ala Glu Gly Leu Arg Ala Ala Leu Ala Gly Ala Glu
 115          120          125
Val Val Arg Lys Asn Leu Glu Glu Gly Arg Gln Arg Glu Leu Glu Glu
 130          135          140
Val Gln Arg Leu His Gln Glu Gln Leu Ser Ser Leu Thr Gln Ala His
 145          150          155          160
Glu Glu Ala Leu Ser Ser Leu Thr Ser Lys Ala Glu Gly Leu Glu Lys
 165          170          175
Ser Leu Ser Ser Leu Glu Thr Arg Arg Ala Gly Glu Ala Lys Glu Leu
 180          185          190
Ala Glu Ala Gln Arg Glu Ala Glu Leu Leu Arg Lys Gln Leu Ser Lys
 195          200          205
Thr Gln Glu Asp Leu Glu Ala Gln Val Thr Leu Val Glu Asn Leu Arg
 210          215          220
Lys Tyr Val Gly Glu Gln Val Pro Ser Glu Val His Ser Gln Thr Trp
 225          230          235          240
Glu Leu Glu Arg Gln Lys Leu Leu Glu Thr Met Gln Leu Leu Gln Glu
 245          250          255
Asp Arg Asp Ser Leu His Ala Thr Ala Glu Leu Leu Gln Val Arg Val
 260          265          270
Gln Ser Leu Thr His Ile Leu Ala Leu Gln Glu Glu Glu Leu Thr Arg
 275          280          285
Lys Val Gln Pro Ser Asp Ser Leu Glu Pro Glu Phe Thr Arg Lys Cys
 290          295          300
Gln Ser Leu Leu Asn Arg Trp Arg Glu Lys Val Phe Ala Leu Met Val
 305          310          315          320
Gln Leu Lys Ala Gln Glu Leu Glu His Ser Asp Ser Val Lys Gln Leu
 325          330          335
Lys Gly Gln Val Ala Ser Leu Gln Glu Lys Val Thr Ser Gln Ser Gln
 340          345          350
Glu Gln Ala Ile Leu Gln Arg Ser Leu Gln Asp Lys Ala Ala Glu Val
 355          360          365
Glu Val Glu Arg Met Gly Ala Lys Gly Leu Gln Leu Glu Leu Ser Arg

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&lt;400&gt; 4736

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Glu Asn Pro Glu Trp Glu Lys Ala Arg Gln Ala Leu Ala Ser Ile Ser
20           25           30
Lys Ser Gly Ala Ala Gly Gly Ser Ala Lys Ser Ser Ser Asn Gly Pro
35           40           45
Val Ala Ser Ala Gln Tyr Val Ser Gln Ala Lys Ala Ser Ala Leu Gln
50           55           60
Gln Gln Gln Tyr Tyr Gln Trp Tyr Gln Gln Asp Asn Tyr Ala Tyr Pro
65           70           75           80
Tyr Ser Tyr Tyr Tyr Pro Met Pro Pro Gly Pro Gly Met
85           90

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&lt;210&gt; 4737

&lt;211&gt; 2602

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 4737

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 <211> 181  
 <212> PRT  
 <213> Homo sapiens

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 Phe Phe Tyr Leu Ser Lys Lys Ile Ser Ile Pro Asn Asn Val Lys Leu  
 35 40 45  
 Gln Cys Val Ser Trp Asn Lys Glu Gln Gly Phe Ile Ala Cys Gly Gly  
 50 55 60  
 Glu Asp Gly Leu Leu Lys Val Leu Lys Leu Glu Thr Gln Thr Asp Asp  
 65 70 75 80  
 Ala Lys Leu Arg Gly Leu Ala Ala Pro Ser Asn Leu Ser Met Asn Gln  
 85 90 95  
 Thr Leu Glu Gly His Ser Gly Ser Val Gln Val Val Thr Trp Asn Glu  
 100 105 110  
 Gln Tyr Gln Lys Leu Thr Thr Ser Asp Glu Asn Gly Leu Ile Ile Val  
 115 120 125  
 Trp Met Leu Tyr Lys Gly Ser Trp Ile Glu Glu Met Ile Asn Asn Arg  
 130 135 140  
 Asn Lys Ser Val Val Arg Ser Met Ser Trp Asn Ala Asp Gly Gln Lys  
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 Gly Asn Arg Ile Trp  
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<210> 4735  
 <211> 300  
 <212> DNA  
 <213> Homo sapiens

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<210> 4736  
 <211> 93  
 <212> PRT  
 <213> Homo sapiens

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<210> 4732

<211> 129

<212> PRT

<213> Homo sapiens

<400> 4732

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20 25 30  
Ala Arg Met Ala Gly His Val Ser Val Leu Val Ser His Phe Pro Pro  
35 40 45  
Ser Val Thr Tyr Leu Gly Ile Pro Gln Gly Leu Leu Glu Cys Asp Cys  
50 55 60  
Pro Leu Pro Ser Cys Leu Gly Tyr Lys Ser Trp Pro Tyr Val Pro Ala  
65 70 75 80  
Val Arg Gly Ser Gly Asn Pro Thr Gln Pro Pro Val Leu Gly Trp Ser  
85 90 95  
Val Ser Ile His Pro Leu Val Val Ile Glu Ala Ala Leu Pro Val Leu  
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Gly Glu Asp Ile Trp Ala Thr Arg Ala Pro Leu Ala Pro Ser Arg Arg  
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Lys

<210> 4733

<211> 543

<212> DNA

<213> Homo sapiens

<400> 4733

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543

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2400



&lt;400&gt; 4730

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 35 40 45  
 Gln Asn Phe Leu Leu Glu Ser Asn Leu Gly Lys Lys Lys Tyr Glu Thr  
 50 55 60  
 Glu Phe His Pro Gly Thr Thr Ser Phe Gly Met Ser Val Phe Asn Leu  
 65 70 75 80  
 Ser Asn Ala Ile Val Gly Ser Gly Ile Leu Gly Leu Ser Tyr Ala Met  
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 Ala Asn Thr Gly Ile Ala Leu Phe Ile Ile Leu Leu Thr Phe Val Ser  
 100 105 110  
 Ile Phe Ser Leu Tyr Ser Val His Leu Leu Leu Lys Thr Ala Asn Glu  
 115 120 125  
 Gly Gly Ser Leu Leu Tyr Glu Gln Leu Gly Tyr Lys Ala Ser Gly Leu  
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 Val Gly Lys Leu  
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&lt;210&gt; 4731

&lt;211&gt; 2417

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 4731

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Leu Cys Asn Lys Asp Phe Phe Gln Lys Met Lys Glu Thr Ala Val Phe		
225	230	235
Ile Asn Ile Ser Arg Gly Asp Val Val Asn Gln Asp Asp Leu Tyr Gln		240
	245	250
Ala Leu Ala Ser Gly Lys Ile Ala Ala Gly Leu Asp Val Thr Ser		255
	260	265
Pro Glu Pro Leu Pro Thr Asn His Pro Leu Leu Thr Leu Lys Asn Cys		270
	275	280
Val Ile Leu Pro His Ile Gly Ser Ala Thr His Arg Thr Arg Asn Thr		285
	290	295
Met Ser Leu Leu Ala Ala Asn Asn Leu Leu Ala Gly Leu Arg Gly Glu		300
305	310	315
Pro Met Pro Ser Glu Leu Lys Leu		320
	325	

&lt;210&gt; 4729

&lt;211&gt; 753

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 4729

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&lt;210&gt; 4730

&lt;211&gt; 148

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

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&lt;210&gt; 4728

&lt;211&gt; 328

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 4728

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 Gln Trp Asp Ser Asp Glu Pro Ile Pro Ala Lys Glu Leu Glu Arg Gly  
 35 40 45  
 Val Ala Gly Ala His Gly Leu Leu Cys Leu Leu Ser Asp His Val Asp  
 50 55 60  
 Lys Arg Ile Leu Asp Ala Ala Gly Ala Asn Leu Lys Val Ile Ser Thr  
 65 70 75 80  
 Met Ser Val Gly Ile Asp His Leu Ala Leu Asp Glu Ile Lys Lys Arg  
 85 90 95  
 Gly Ile Arg Val Gly Tyr Thr Pro Asp Val Leu Thr Asp Thr Thr Ala  
 100 105 110  
 Glu Leu Ala Val Ser Leu Leu Leu Thr Thr Cys Arg Arg Leu Pro Glu  
 115 120 125  
 Ala Ile Glu Glu Val Lys Asn Gly Gly Trp Thr Ser Trp Lys Pro Leu  
 130 135 140  
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 165 170 175  
 Val Gln Arg Phe Leu Tyr Thr Gly Arg Gln Pro Arg Pro Glu Glu Ala  
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&lt;210&gt; 4727

&lt;211&gt; 2031

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 4727

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1320  
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1440

&lt;400&gt; 4724

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 Gly Pro Pro Ser Pro Phe Pro Arg Gln Ser Pro Phe Gly Leu Asn Pro  
 35 40 45  
 Phe Leu Pro Ala Gly Asp  
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&lt;210&gt; 4725

&lt;211&gt; 366

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 4725

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 240  
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 366

&lt;210&gt; 4726

&lt;211&gt; 122

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 4726

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 20 25 30  
 His Val His Val Tyr Ser Arg Leu Cys Ala Cys Ala Arg Val Tyr Met  
 35 40 45  
 His Met Cys Thr Gly Ala Cys Ala Cys Val Asn Thr Cys Ser His Val  
 50 55 60  
 Cys Thr Cys Xaa Ser Cys Pro Cys Xaa Tyr Val His Thr Cys Leu Cys  
 65 70 75 80  
 Met His Ala Cys Ile Ala Val Cys Pro Tyr Pro His Val Arg Ile His  
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<213> Homo sapiens

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<213> Homo sapiens

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<211> 285

<212> PRT

<213> Homo sapiens

<400> 4722

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Ser	Asp	Glu	Glu	Pro	Ala	Leu	Ser	Ser	Ser	Glu	Asp	Glu	Val	Asp	Val
		20						25					30		
Leu	Leu	His	Gly	Thr	Pro	Asp	Gln	Lys	Arg	Lys	Leu	Ile	Arg	Glu	Cys
		35					40					45			
Leu	Thr	Gly	Glu	Ser	Glu	Ser	Ser	Ser	Glu	Asp	Glu	Phe	Glu	Lys	Glu
	50					55				60					
Met	Glu	Ala	Glu	Leu	Asn	Ser	Thr	Met	Lys	Thr	Met	Glu	Asp	Lys	Leu
65					70					75				80	
Ser	Ser	Leu	Gly	Thr	Gly	Ser	Ser	Ser	Gly	Asn	Gly	Lys	Val	Ala	Thr
				85					90				95		
Ala	Pro	Thr	Arg	Tyr	Tyr	Asp	Asp	Ile	Tyr	Phe	Asp	Ser	Asp	Ser	Glu
		100						105					110		
Asp	Glu	Asp	Arg	Ala	Val	Gln	Val	Thr	Lys	Lys	Lys	Lys	Lys	Lys	Gln
	115						120					125			
His	Lys	Ile	Pro	Thr	Asn	Asp	Glu	Leu	Leu	Tyr	Asp	Pro	Glu	Lys	Asp
	130					135					140				
Asn	Arg	Asp	Gln	Ala	Trp	Val	Asp	Ala	Gln	Arg	Arg	Gly	Tyr	His	Gly
145					150					155				160	
Leu	Gly	Pro	Gln	Arg	Ser	Arg	Gln	Gln	Gln	Pro	Val	Pro	Asn	Ser	Asp
			165						170				175		
Ala	Val	Leu	Asn	Cys	Pro	Ala	Cys	Met	Thr	Thr	Leu	Cys	Leu	Asp	Cys
		180						185				190			
Gln	Arg	His	Glu	Ser	Tyr	Lys	Thr	Gln	Tyr	Arg	Ala	Met	Phe	Val	Met
	195						200					205			
Asn	Cys	Ser	Ile	Asn	Lys	Glu	Glu	Val	Leu	Arg	Tyr	Lys	Ala	Ser	Glu
	210					215					220				
Asn	Arg	Lys	Lys	Arg	Arg	Val	His	Lys	Lys	Met	Arg	Ser	Asn	Arg	Glu
225				230						235				240	
Asp	Ala	Ala	Glu	Lys	Ala	Glu	Thr	Asp	Val	Glu	Glu	Ile	Tyr	His	Pro
			245						250				255		
Val	Met	Cys	Thr	Glu	Cys	Ser	Thr	Glu	Val	Ala	Val	Tyr	Asp	Lys	Asp
		260						265					270		
Glu	Val	Phe	His	Phe	Phe	Asn	Val	Leu	Ala	Ser	His	Ser			
		275					280					285			

130		135		140	
Asp Gly Gly Tyr Thr Ser Ser Cys Phe Asn Leu Ser Ala Met Phe Leu					
145		150		155	160
Gln Gly Ala Pro Gly Phe Pro Lys Asp Met Asp Leu Ala Cys Lys Tyr					
	165		170		175
Ser Met Lys Ala Cys Asp Leu Gly His Ile Trp Ala Cys Ala Asn Ala					
	180	185		190	
Ser Arg Met Tyr					
195					

&lt;210&gt; 4721

&lt;211&gt; 1385

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 4721

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245 250 255

Lys His Phe

<210> 4719  
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 <212> DNA  
 <213> Homo sapiens

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 35 40 45  
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 50 55 60  
 Glu Glu Asn Gln His Ser Asp Ser Cys Tyr Lys Leu Gly Ala Tyr Tyr  
 65 70 75 80  
 Val Thr Gly Lys Gly Leu Thr Gln Asp Leu Lys Ala Ala Ala Arg  
 85 90 95  
 Cys Phe Leu Met Ala Cys Glu Lys Pro Gly Lys Lys Ser Ile Ala Ala  
 100 105 110  
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 115 120 125  
 Gly Gln Pro Asp Leu Gly Lys Ala Arg Asp Tyr Tyr Thr Arg Ala Cys

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<210> 4718

<211> 259

<212> PRT

<213> Homo sapiens

<400> 4718

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Gln	Gln	Lys	Arg	Gly	Arg	Arg	Glu	His	Lys	Ala	Leu	Ile	Lys	Gln	Asp
			20					25					30		
Asn	Leu	Asp	Ala	Phe	Asn	Glu	Arg	Asp	Pro	Tyr	Lys	Ala	Asp	Asp	Ser
		35					40					45			
Arg	Glu	Glu	Glu	Glu	Glu	Asn	Asp	Asp	Asp	Asn	Ser	Leu	Glu	Gly	Glu
	50					55					60				
Thr	Phe	Pro	Leu	Glu	Arg	Asp	Glu	Val	Met	Pro	Pro	Pro	Leu	Gln	His
65					70					75				80	
Pro	Gln	Thr	Asp	Arg	Leu	Thr	Cys	Pro	Lys	Gly	Leu	Pro	Trp	Ala	Pro
				85					90					95	
Lys	Val	Arg	Glu	Lys	Asp	Ile	Glu	Met	Phe	Leu	Glu	Ser	Ser	Arg	Ser
			100					105					110		
Lys	Phe	Ile	Gly	Tyr	Thr	Leu	Gly	Ser	Asp	Thr	Asn	Thr	Val	Val	Gly
		115					120					125			
Leu	Pro	Arg	Pro	Ile	His	Glu	Ser	Ile	Lys	Thr	Leu	Lys	Gln	His	Lys
	130					135					140				
Tyr	Thr	Ser	Ile	Ala	Glu	Val	Gln	Ala	Gln	Met	Lys	Glu	Glu	Tyr	Leu
145					150					155				160	
Arg	Ser	Pro	Leu	Ser	Gly	Gly	Glu	Glu	Glu	Val	Glu	Gln	Val	Pro	Ala
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Glu	Thr	Leu	Tyr	Gln	Gly	Leu	Leu	Pro	Ser	Leu	Pro	Gln	Tyr	Met	Ile
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 Lys Pro Pro Lys Lys Lys Lys Lys Arg Arg Gln Lys Glu Glu Glu  
 180 185 190  
 Glu Ala Thr Ala Ser Glu Arg Asn Asp Ala Asp Glu Lys His Pro Glu  
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&lt;210&gt; 4717

&lt;211&gt; 2753

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 4717

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 2051

&lt;210&gt; 4716

&lt;211&gt; 239

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 4716

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<211> 2051
<212> DNA
<213> Homo sapiens
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&lt;210&gt; 4714

&lt;211&gt; 145

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 4714

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 1920  
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 1980  
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 2040  
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 2061

&lt;210&gt; 4712

&lt;211&gt; 187

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 4712

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			20					25					30		
Val	Gly	Ser	Gly	Ser	Arg	Glu	Leu	Ser	Leu	Arg	Pro	Ser	Arg	Ser	Gly
			35				40					45			
Ala	Gln	Gln	Leu	Glu	Glu	Glu	Gly	Pro	Met	Glu	Glu	Glu	Glu	Ala	Gln
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Pro	Met	Ala	Ala	Pro	Glu	Gly	Lys	Arg	Ser	Leu	Ala	Asn	Gly	Pro	Asn
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Ala	Gly	Glu	Gln	Pro	Gly	Gln	Val	Ala	Gly	Ala	Asp	Phe	Glu	Ser	Glu
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Asp	Glu	Gly	Glu	Glu	Phe	Asp	Asp	Trp	Glu	Asp	Asp	Tyr	Asp	Tyr	Pro
			100					105					110		
Glu	Glu	Glu	Gln	Leu	Ser	Gly	Ala	Gly	Tyr	Arg	Val	Ser	Ala	Ala	Leu
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Glu	Glu	Ala	Asp	Lys	Met	Phe	Leu	Arg	Thr	Arg	Glu	Pro	Ala	Leu	Asp
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Phe	Ile	Glu	Glu	Leu	Phe	Ser	Leu	Met	Val	Val	Asn	Arg	Leu	Thr	Glu
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Glu	Leu	Gly	Cys	Asp	Glu	Ile	Ile	Asp	Arg	Glu					
			180					185							

&lt;210&gt; 4713

&lt;211&gt; 1324

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 4713



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<211> 304

<212> PRT

<213> Homo sapiens

<400> 4710

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Gly Thr Val Leu Ala Ser Arg Pro His Thr Leu Asp Gly Arg Asn Ile
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Asp Pro Lys Pro Cys Thr Pro Arg Gly Met Gln Pro Glu Arg Thr Arg
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Pro Lys Glu Gly Trp Gln Lys Gly Pro Arg Ser Asp Asn Ser Lys Ser
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Asn Lys Ile Phe Val Gly Gly Ile Pro His Asn Cys Gly Glu Thr Glu
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Ser Lys Ser Gln Ala Pro Gly Gln Pro Gly Ala Ser Gln Trp Gly Ser
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Arg Val Val Pro Asn Ala Ala Asn Gly Trp Ala Gly Gln Pro Pro Pro
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Thr Trp Gln Gln Gly Tyr Gly Pro Gln Gly Met Trp Val Pro Ala Gly
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Gln Ala Ile Gly Gly Tyr Gly Pro Pro Pro Ala Gly Arg Gly Ala Pro
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Pro Pro Pro Pro Pro Phe Thr Ser Tyr Ile Val Ser Thr Pro Pro Gly
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<210> 4711

<211> 2061

<212> DNA

<213> Homo sapiens

<400> 4711

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 <211> 1351  
 <212> DNA  
 <213> Homo sapiens

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145

150

&lt;210&gt; 4707

&lt;211&gt; 748

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 4707

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&lt;210&gt; 4708

&lt;211&gt; 128

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 4708

Met	Ala	Ala	Pro	Glu	Gln	Pro	Leu	Ala	Ile	Ser	Arg	Gly	Cys	Thr	Ser
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Ser	Ser	Ser	Leu	Ser	Pro	Pro	Arg	Gly	Asp	Arg	Thr	Leu	Leu	Val	Arg
			20					25					30		
His	Leu	Pro	Ala	Glu	Leu	Thr	Ala	Glu	Glu	Lys	Glu	Asp	Leu	Leu	Lys
			35				40					45			
Tyr	Phe	Gly	Ala	Gln	Ser	Val	Arg	Val	Leu	Ser	Asp	Lys	Gly	Arg	Leu
			50				55				60				
Lys	His	Thr	Ala	Phe	Ala	Thr	Phe	Pro	Asn	Glu	Lys	Ala	Ala	Ile	Lys
					70					75				80	
Ala	Leu	Thr	Arg	Leu	His	Gln	Leu	Lys	Leu	Leu	Gly	His	Thr	Leu	Val
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105

110

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 <211> 569  
 <212> DNA  
 <213> Homo sapiens

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 <213> Homo sapiens

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 50 55 60  
 Ser Ser Leu Thr Ser Ala Phe Ser Leu Leu Leu Pro Gln Met Ala Asn  
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 85 90 95  
 Gln Glu Gly Thr Ile Trp Arg Gln Met Thr Lys Thr Trp Ala Pro His  
 100 105 110  
 Val His Pro Ile Gln Pro Val Cys Ala Ser Arg Gly Gln Thr Ser His  
 115 120 125  
 Ile Val Phe Trp Leu Val Leu Leu Lys Phe Leu Arg Leu Val Met Ser  
 130 135 140  
 Leu Gly Leu Ala Ser Val Phe His Cys Pro

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      1           5           10           15
Asp Pro Pro Thr Ser Ala Ser Glu Asn Ala Gly Ile Thr Gly Leu Ser
      20           25           30
His Xaa Pro Pro Gly His Phe Phe Leu Glu Thr Arg Ser Tyr Ser Leu
      35           40           45
Ala Lys Asn Gly Val Gln Trp Cys Asn Val Gly Ser Leu Gln Pro Lys
      50           55           60
Pro Pro Gly Leu Lys
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&lt;210&gt; 4703

&lt;211&gt; 513

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 4703

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513

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&lt;210&gt; 4704

&lt;211&gt; 112

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 4704

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      20           25           30
His Leu Pro Ala Glu Leu Thr Ala Glu Glu Lys Glu Asp Leu Leu Lys
      35           40           45
Tyr Phe Gly Ala Gln Ser Val Arg Val Leu Ser Asp Lys Gly Arg Leu
      50           55           60
Lys His Thr Ala Phe Ala Thr Phe Pro Asn Glu Lys Ala Ala Ile Lys
      65           70           75           80
Ala Leu Thr Arg Leu His Gln Leu Lys Leu Leu Gly His Thr Leu Val
      85           90           95
Val Glu Phe Ala Lys Glu Gln Asp Arg Val His Ser Pro Cys Pro Thr

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 1441

&lt;210&gt; 4700

&lt;211&gt; 116

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 4700

Met	Asp	Thr	Ile	Phe	Gly	Asn	Val	Thr	Glu	Tyr	Gln	Arg	Leu	Gln	Leu
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Ser	Thr	Arg	Gly	Gln	Ser	Lys	Thr	Gly	Trp	Lys	Leu	Pro	Val	Thr	Leu
			20					25				30			
Ile	Cys	Cys	Pro	Arg	His	Pro	Leu	Met	Arg	Leu	Lys	Leu	Gly	Pro	Ser



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<210> 4698

<211> 182

<212> PRT

<213> Homo sapiens

<400> 4698

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Thr	Asp	Gly	Thr	Val	Phe	Arg	Ile	His	Thr	Lys	Ala	Glu	Gly	Phe	Met
	20						25						30		
Asp	Ala	Asp	Ile	Pro	Leu	Glu	Leu	Val	Phe	His	Leu	Pro	Val	Asn	Tyr
	35					40					45				
Pro	Ser	Cys	Leu	Pro	Gly	Ile	Ser	Ile	Asn	Ser	Glu	Gln	Leu	Thr	Arg
	50				55				60						
Ala	Gln	Cys	Val	Thr	Val	Lys	Glu	Lys	Leu	Leu	Glu	Gln	Ala	Glu	Ser
65				70				75					80		
Leu	Leu	Ser	Glu	Pro	Met	Val	His	Glu	Leu	Val	Leu	Trp	Ile	Gln	Gln
			85					90					95		
Asn	Leu	Arg	His	Ile	Leu	Ser	Gln	Pro	Glu	Thr	Gly	Ser	Gly	Ser	Glu
	100						105					110			
Lys	Cys	Thr	Phe	Ser	Thr	Ser	Thr	Thr	Met	Asp	Asp	Gly	Leu	Trp	Ile
	115					120						125			
Thr	Leu	Leu	His	Leu	Asp	His	Met	Arg	Ala	Lys	Thr	Lys	Tyr	Val	Lys
	130					135					140				
Ile	Val	Glu	Lys	Trp	Ala	Ser	Asp	Leu	Arg	Leu	Thr	Gly	Arg	Leu	Met
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Phe	Met	Gly	Lys	Ile	Ile	Leu	Ile	Leu	Leu	Gln	Gly	Asp	Arg	Asn	Asn
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<212> DNA

<213> Homo sapiens

<400> 4699

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 Lys Leu Ser Val Leu Leu Leu Glu Lys Met Gly Gly Ser Ser Gly Ala  
                          165                      170                      175  
 Leu Tyr Gly Leu Phe Leu Thr Ala Ala Gln Pro Leu Lys Ala Lys  
                          180                      185                      190  
 Thr Ser Leu Pro Ala Trp Ser Ala Ala Met Asp Ala Gly Leu Glu Ala  
                          195                      200                      205  
 Met Gln Lys Tyr Gly Lys Ala Ala Pro Gly Asp Arg Thr Met Leu Asp  
                          210                      215                      220  
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 225     230     235     240  
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    245     250     255  
 Ala Ala Glu Ala Thr Lys Asn Met Glu Ala Gly Ala Gly Arg Ala Ser  
    260     265     270  
 Tyr Ile Ser Ser Ala Arg Leu Glu Gln Pro Asp Pro Gly Ala Val Ala  
    275     280     285  
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&lt;210&gt; 4697

&lt;211&gt; 1047

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 4697

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<211> 302

<212> PRT

<213> Homo sapiens

<400> 4696

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		20						25				30			
Leu	Glu	Met	Pro	Gly	Ile	Ser	Leu	Thr	Leu	Leu	Leu	Val	Asp	Glu	Pro
		35					40					45			
Leu	Leu	Lys	Leu	Ile	Asp	Ala	Glu	Thr	Thr	Ala	Ala	Ala	Trp	Pro	Asn
	50				55					60					
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Ala	Glu	Pro	Gln	Glu	Ala	Pro	Asp	Ser	Thr	Ala	Ala	Xaa	Glu	Ala	Gln
			85					90					95		
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		100					105					110			
Leu	Gly	Leu	Glu	Glu	His	Leu	Asn	Ala	Leu	Asp	Arg	Ala	Ala	Gly	Asp
	115					120						125			
Gly	Asp	Cys	Gly	Thr	Thr	His	Ser	Arg	Ala	Ala	Arg	Ala	Ile	Gln	Glu
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100

&lt;210&gt; 4695

&lt;211&gt; 2209

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 4695

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 794

<210> 4694  
 <211> 103  
 <212> PRT  
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<400> 4694  
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 Asn Ser Gly Val Gly Gln Asp Gly Ser Leu Leu Ser Ser Pro Phe Leu  
 35 40 45  
 Lys Gly Phe Leu Ala Gly Tyr Val Val Ala Lys Leu Arg Ala Ser Ala  
 50 55 60  
 Val Leu Gly Phe Ala Val Gly Thr Cys Thr Gly Ile Tyr Ala Ala Gln  
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 Ala Tyr Ala Val Pro Asn Val Glu Lys Thr Leu Arg Asp Tyr Leu Gln  
 85 90 95  
 Leu Leu Arg Lys Gly Pro Asp

&lt;211&gt; 383

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 4692

```

Xaa Asp Leu Lys Ala Lys Met Pro Asp Asp His Ala Arg Lys Ile Leu
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Leu Ser Arg Ile Asn Asn Tyr Thr Ile Pro Glu Glu Glu Ile Gly Ser
      20          25          30
Phe Leu Phe His Ala Ile Asn Lys Pro Asn Ala Pro Ile Trp Leu Ile
      35          40          45
Leu Asn Glu Ala Gly Leu Tyr Trp Arg Ala Val Gly Asn Ser Thr Phe
      50          55          60
Ala Ile Ala Cys Leu Gln Arg Ala Leu Asn Leu Ala Pro Leu Gln Tyr
65          70          75          80
Gln Asp Val Pro Leu Val Asn Leu Ala Asn Leu Leu Ile His Tyr Gly
      85          90          95
Leu His Leu Asp Ala Thr Lys Leu Leu Leu Gln Ala Leu Ala Ile Asn
      100          105          110
Ser Ser Glu Pro Leu Thr Phe Leu Ser Leu Gly Asn Ala Tyr Leu Ala
      115          120          125
Leu Lys Asn Ile Ser Gly Ala Leu Glu Ala Phe Arg Gln Ala Leu Lys
      130          135          140
Leu Thr Thr Lys Cys Pro Glu Cys Glu Asn Ser Leu Lys Leu Ile Arg
145          150          155          160
Cys Met Gln Phe Tyr Pro Phe Leu Tyr Asn Ile Thr Ser Ser Val Cys
      165          170          175
Ser Gly Asn Cys His Glu Lys Thr Leu Asp Asn Ser His Asp Lys Gln
      180          185          190
Lys Tyr Phe Asp Asn Ser Gln Ser Leu Asp Ala Ala Glu Glu Glu Pro
      195          200          205
Ser Glu Arg Gly Thr Glu Glu Asp Pro Val Phe Ser Val Glu Asn Ser
      210          215          220
Gly Arg Asp Ser Asp Ala Leu Arg Leu Glu Ser Thr Val Val Glu Glu
225          230          235          240
Ser Asn Gly Ser Asp Glu Met Glu Asn Ser Asp Glu Thr Lys Met Ser
      245          250          255
Glu Glu Ile Leu Ala Leu Val Asp Glu Phe Gln Gln Ala Trp Pro Leu
      260          265          270
Glu Gly Phe Gly Gly Ala Leu Glu Met Lys Gly Arg Arg Leu Asp Leu
      275          280          285
Gln Gly Ile Arg Val Leu Lys Lys Gly Pro Gln Asp Gly Val Ala Arg
      290          295          300
Ser Ser Cys Tyr Gly Asp Cys Arg Ser Glu Asp Asp Glu Ala Thr Glu
305          310          315          320
Trp Ile Thr Phe Gln Val Lys Arg Val Lys Lys Pro Lys Gly Asp His
      325          330          335
Lys Lys Thr Pro Gly Lys Lys Val Glu Thr Gly Gln Ile Glu Asn Gly
      340          345          350
His Arg Tyr Gln Ala Asn Leu Glu Ile Thr Gly Pro Lys Val Ala Ser
      355          360          365
Pro Gly Pro Gln Gly Leu Leu Asp Trp Lys Thr Arg Lys Val Pro
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&lt;210&gt; 4692

145                      150                      155                      160  
 Leu Lys Asp Leu Gly Val Thr Val Phe Ile Val Ser Thr Gly Arg Gly  
                                  165                      170                      175  
 Asn Phe Leu Glu Leu Ser Ala Ala Ser Ala Pro Ala Glu Lys His  
                                  180                      185                      190  
 Leu His Phe Val Asp Val Asp Asp Leu His Ile Ile Val Gln Glu Leu  
                                  195                      200                      205  
 Arg Gly Ser Ile Leu Asp Ala Met Arg Pro Gln Gln Leu His Ala Thr  
                                  210                      215                      220  
 Glu Ile Thr Ser Ser Gly Phe Arg Leu Ala Trp Pro Pro Leu Leu Thr  
 225                                   230                                   235                                   240  
 Ala Asp Ser Gly Tyr Tyr Val Leu Glu Leu Val Pro Ser Ala Gln Pro  
                                  245                                   250                                   255  
 Gly Ala Ala Arg Arg Gln Gln Leu Pro Gly Asn Ala Thr Asp Trp Ile  
                                  260                                   265                                   270  
 Trp Ala Gly Leu Asp Pro Asp Thr Asp Tyr Asp Val Ala Leu Val Pro  
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<210> 4691

<211> 2375

<212> DNA

<213> Homo sapiens

<400> 4691

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&lt;210&gt; 4690

&lt;211&gt; 299

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 4690

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Ala	Leu	Ser	Leu	Arg	Trp	Arg	Trp	Arg	Thr	Pro	Asp	Cys	Pro	Pro	Ala
			20					25					30		
Ser	Ala	Pro	Glu	Asp	Leu	Met	Phe	Leu	Leu	Asp	Ser	Ser	Ala	Ser	Val
		35					40					45			
Ser	His	Tyr	Glu	Phe	Ser	Arg	Val	Arg	Glu	Phe	Val	Gly	Gln	Leu	Val
	50					55					60				
Ala	Pro	Leu	Pro	Leu	Ala	Pro	Xaa	Ala	Leu	Arg	Ala	Ser	Leu	Val	His
65					70					75				80	
Val	Gly	Ser	Arg	Pro	Tyr	Thr	Glu	Phe	Pro	Phe	Gly	Gln	His	Ser	Ser
			85					90					95		
Gly	Glu	Ala	Ala	Gln	Asp	Ala	Val	Arg	Ala	Ser	Ala	Gln	Arg	Met	Gly
			100					105				110			
Asp	Thr	His	Thr	Gly	Leu	Ala	Leu	Val	Tyr	Ala	Lys	Glu	Gln	Leu	Phe
		115					120					125			
Ala	Glu	Ala	Ser	Gly	Ala	Arg	Pro	Gly	Val	Pro	Lys	Val	Leu	Val	Trp
		130				135					140				
Val	Thr	Asp	Gly	Gly	Ser	Ser	Asp	Pro	Val	Gly	Pro	Pro	Met	Gln	Glu

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      50              55              60
Asn Asp Lys Ser Val Gly Gly Ser Phe Tyr Leu Gln Ser Lys Val Val
65              70              75              80
Arg Ala Lys Glu Arg Leu Asp Glu Glu Leu Lys Ile Gln Ala Gln Glu
      85              90              95
Asp Arg Glu Lys Gly Gln Met Pro His Thr
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<210> 4687  
 <211> 309  
 <212> DNA  
 <213> Homo sapiens

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<400> 4687
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<210> 4688  
 <211> 90  
 <212> PRT  
 <213> Homo sapiens

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<400> 4688
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Ala Leu Pro Val Ser Tyr Ala Leu Asn His Val Ser Ala Leu Ser His
      20              25              30
Pro Leu Trp Val Ala Leu Met Ser Ala Leu Ile Leu Gly Leu Leu Phe
      35              40              45
Val Ala Val Tyr Ser Leu Ser His Gly Glu Val Ser Tyr Asp Pro Leu
      50              55              60
Tyr Ala Gly Phe Ala Val Phe Ala Phe Thr Ser Gly Gly Asp Leu Ile
65              70              75              80
Ile Ala Leu Gln Glu Asp Ser Tyr Gly Gly
      85              90

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<210> 4689  
 <211> 898  
 <212> DNA  
 <213> Homo sapiens

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<400> 4689
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 Ser Phe Gln Ser Arg Leu Pro Leu Pro Glu Pro Trp Arg Gly Leu Arg  
                                  325                      330                      335  
 Asp Glu Ala Leu Asp Gln Val Ser Gly Ile Pro Gly Cys Ile Phe Val  
                                  340                      345                      350  
 His Ala Ser Gly Phe Ile Gly Gly His Arg Thr Arg Glu Gly Ala Leu  
                                  355                      360                      365  
 Ser Met Ala Arg Ala Thr Leu Ala Gln Arg Ser Tyr Leu Pro Gln Ile  
                                  370                      375                      380  
 Ser  
 385

<210> 4685

<211> 618

<212> DNA

<213> Homo sapiens

<400> 4685

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<210> 4686

<211> 106

<212> PRT

<213> Homo sapiens

<400> 4686

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                                   20                                  25                                  30  
 Ser Gly Leu Ser Leu Gln Glu Ala Gln Gln Ile Leu Asn Val Ser Lys  
                                   35                                  40                                  45  
 Leu Ser Pro Glu Glu Val Gln Lys Asn Tyr Glu His Leu Phe Lys Val

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<210> 4684

<211> 385

<212> PRT

<213> Homo sapiens

<400> 4684

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			20					25					30		
Pro	His	Ala	Arg	Ser	Arg	Val	Arg	Pro	Ala	Pro	Lys	Thr	Ile	Pro	Gln
			35					40					45		
Gln	Thr	His	Gly	Thr	Ala	Arg	Ile	Gly	Thr	His	Asn	Gly	Thr	Phe	His
			50					55					60		
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Arg	Asp	Ala	Glu	Ile	Val	Arg	Thr	Arg	Asp	Pro	Glu	Lys	Leu	Ala	Ser
				85						90				95	
Cys	Asp	Ile	Val	Val	Asp	Val	Gly	Gly	Glu	Tyr	Asp	Pro	Arg	Arg	His
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Arg	Tyr	Asp	His	His	Gln	Arg	Ser	Phe	Thr	Glu	Thr	Met	Ser	Ser	Leu
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			130					135						140	
Tyr	Leu	His	Phe	Gly	His	Lys	Leu	Leu	Ala	Gln	Leu	Leu	Gly	Thr	Ser
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Glu	Glu	Asp	Ser	Met	Val	Gly	Thr	Leu	Tyr	Asp	Lys	Met	Tyr	Glu	Asn
				165						170				175	
Phe	Val	Glu	Glu	Val	Asp	Ala	Val	Asp	Asn	Gly	Ile	Ser	Gln	Trp	Ala
				180					185					190	
Glu	Gly	Glu	Pro	Arg	Tyr	Ala	Leu	Thr	Thr	Thr	Leu	Ser	Ala	Arg	Val
			195					200					205		
Ala	Arg	Leu	Asn	Pro	Thr	Trp	Asn	His	Pro	Asp	Gln	Asp	Thr	Glu	Ala
			210					215					220		
Gly	Phe	Lys	Arg	Ala	Met	Asp	Leu	Val	Gln	Glu	Glu	Phe	Leu	Gln	Arg
225					230					235				240	
Leu	Asp	Phe	Tyr	Gln	His	Ser	Trp	Leu	Pro	Ala	Arg	Ala	Leu	Val	Glu
				245						250				255	
Glu	Ala	Leu	Ala	Gln	Arg	Phe	Gln	Val	Asp	Pro	Ser	Gly	Glu	Ile	Val
			260					265					270		
Glu	Leu	Ala	Lys	Gly	Ala	Cys	Pro	Trp	Lys	Glu	His	Leu	Tyr	His	Leu
			275					280					285		
Glu	Ser	Gly	Leu	Ser	Pro	Pro	Val	Ala	Ile	Phe	Phe	Val	Ile	Tyr	Thr
			290					295					300		
Asp	Gln	Ala	Gly	Gln	Trp	Arg	Ile	Gln	Cys	Val	Pro	Lys	Glu	Pro	His

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&lt;210&gt; 4683

&lt;211&gt; 3246

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 4683

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&lt;210&gt; 4682

&lt;211&gt; 153

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 4682

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Phe	Met	Leu	Tyr	Cys	Gly	Ala	Arg	Gly	Lys	Thr	Cys	Leu	Tyr	Ala	Gly
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 <213> Homo sapiens

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<211> 133

<212> PRT

<213> Homo sapiens

<400> 4678

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			20					25					30		
Arg	Thr	Val	Phe	Ile	Trp	Phe	Val	Gly	Gln	Leu	Leu	Gly	Gly	Glu	Leu
			35				40						45		
Lys	Gly	Tyr	Ser	Lys	Thr	Asn	Thr	Thr	Ser	Ser	Arg	Pro	Ala	Ser	Ser
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Arg	Gly	Ser	Leu	Ser	Ser	Ser	Ser	Ser	Ser	Ser	Ser	Ser	Leu	Thr	Lys
65					70					75					80
Asp	Ala	Leu	Pro	Ser	Ser	Leu	Lys	Ser	Asp	Ser	Thr	Thr	Ile	Thr	Ser
				85					90					95	
Gly	Leu	Val	Phe	Pro	Phe	Arg	Ser	Leu	Cys	Val	Asn	Pro	Ala	Lys	Ser
			100					105					110		
Ser	Val	Ser	Glu	Ser	Val	Ser	Ser	Ile	Lys	Ile	Leu	Leu	Ser	Ser	Ser
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<210> 4679

<211> 2284

<212> DNA

<213> Homo sapiens

<400> 4679

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 Ser Ser Cys Lys Pro Pro His Glu Arg Ala Gly Xaa Phe Ala Ala Cys  
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&lt;210&gt; 4677

&lt;211&gt; 940

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 4677

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&lt;211&gt; 641

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 4676

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 165 170 175  
 Arg Glu Lys Asp Leu Leu Ser Met Leu Cys Arg Asn Gln Leu Ser Pro  
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 Val Asn Ile His Pro Ser Tyr Ala Pro Ser Ser Pro Ser Ser Ser Asn  
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 Ser Gly Ser Tyr Lys Gly Ser Asp Cys Ser Pro Ile Met Arg Arg Ser  
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 Gly Arg Tyr Met Ser Cys Gly Glu Asn His Gly Val Arg Pro Pro Asn  
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 Pro Glu Gln Tyr Leu Thr Pro Leu Gln Gln Lys Glu Val Thr Val Arg  
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 His Leu Lys Thr Lys Leu Lys Glu Ser Glu Arg Arg Leu His Glu Arg  
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&lt;210&gt; 4676

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390

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400

&lt;210&gt; 4675

&lt;211&gt; 2868

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 4675

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&lt;211&gt; 402

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 4674

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 35           40           45
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 50           55           60
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 65           70           75           80
Ser Cys Phe Gln Ser Gly Asn Lys Arg Asn His Glu Pro Phe Ile Ala
 85           90           95
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Ser Gln Ala Pro Glu Lys Val Thr Leu Leu Val Asp Gly Thr Arg Phe
 115          120          125
Val Val Asn Pro Gln Ile Phe Thr Ala His Pro Asp Thr Met Leu Gly
 130          135          140
Arg Met Phe Gly Pro Gly Arg Glu Tyr Asn Phe Thr Arg Pro Asn Glu
 145          150          155          160
Lys Gly Glu Tyr Glu Ile Ala Glu Gly Ile Ser Ala Thr Val Phe Arg
 165          170          175
Thr Val Leu Asp Tyr Tyr Lys Thr Gly Ile Ile Asn Cys Pro Asp Gly
 180          185          190
Ile Ser Ile Pro Asp Leu Arg Asp Thr Cys Asp Tyr Leu Cys Ile Asn
 195          200          205
Phe Asp Phe Asn Thr Ile Arg Cys Gln Asp Leu Ser Ala Leu Leu His
 210          215          220
Glu Leu Ser Asn Asp Gly Ala His Lys Gln Phe Asp His Tyr Leu Glu
 225          230          235          240
Glu Leu Ile Leu Pro Ile Met Val Gly Cys Ala Lys Lys Gly Glu Arg
 245          250          255
Glu Cys His Ile Val Val Leu Thr Asp Glu Asp Ser Val Asp Trp Asp
 260          265          270
Glu Asp His Pro Pro Pro Met Gly Glu Glu Tyr Ser Gln Ile Leu Tyr
 275          280          285
Ser Ser Lys Leu Tyr Arg Phe Phe Lys Tyr Ile Glu Asn Arg Asp Val
 290          295          300
Ala Lys Thr Val Leu Lys Glu Arg Gly Leu Lys Asn Ile Arg Ile Gly
 305          310          315          320
Ile Glu Gly Tyr Pro Thr Cys Lys Glu Lys Ile Lys Arg Arg Pro Gly
 325          330          335
Gly Arg Ser Glu Val Ile Tyr Asn Tyr Val Gln Arg Pro Phe Ile Gln
 340          345          350
Met Ser Trp Glu Lys Glu Glu Gly Lys Ser Arg His Val Asp Phe Gln
 355          360          365
Cys Val Arg Ser Lys Ser Leu Thr Asn Leu Val Ala Ala Gly Asp Asp
 370          375          380
Val Leu Glu Asp Gln Glu Ile Leu Met His His Pro Pro Gln Val Asp

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<210> 4673  
<211> 1335  
<212> DNA  
<213> Homo sapiens

<400> 4673  
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120  
aatctaagga tgaatgttca ccgtggcagt gacagtgaca gggtattgag gcaggaggcc  
180  
agctgcttag tggatgatac tttagctgta gcccaagaaa aagaagcaaa cagcctggct  
240  
tcattctggc ctcataatct tacttatcct ctaggtocca ggaatgaaga cctctcactt  
300  
gactatgcct ctcagccagc aaatcttcag ttccctcaca taatgcccct tgctgaagac  
360  
atcaaagggt cttgcttcca aagtgggaat aaacggaacc atgaaccttt tattgctcca  
420  
gaaagatttg gaaacagtag tgtgggcttt ggcagtaatt ccatttcca agcaccagag  
480  
aaagtgcgc ttctttaga tggcacacgt tttgtgtga atccacagat tttactgtc  
540  
catccggata ccatgctggg aaggatgttt ggaccaggaa gagagtacaa cttactcgg  
600  
cccaatgaga agggagagta tgagattgct gaaggcatca gtgcaactgt atttcgcaca  
660  
gtgctggatt attacaaaac cggatcatc aattgtctg atggcatctc tatcccagat  
720  
cttagagata cttgtgatta tctctgcatt aattttgact tcaacactat ccgatgtcaa  
780  
gatctgagt ctttactcca tgaactgtct aatgacgggt ctcataagca gtttgatcac  
840  
tacctcgaag agctcatctt gcccatcatg gtgggctgtg ccaagaaagg agaacgagag  
900  
tgccacattg ttgtgctgac ggatgaggat tctgtggact gggatgaaga ccacctcca  
960  
ccaatggggg aggaatattc ccaaattctt tatagctcca agctctacag attcttcaaa  
1020  
tatattgaga atagggatgt tgcaaaaaca gtgttaaagg aacggggcct aaaaaacatt  
1080  
cgcattggaa ttgaagggtta ccctacctgt aaagaaaaaa ttaagagaag gcctggcggc  
1140  
cgttctgaag tcatttataa ttatgtacaa cgcctcttca tccagatgtc atgggaaaag  
1200  
gaagaaggga agagtcgcca tgtggatttc cagtgtgttc gaagcaaata cctcacgaat  
1260  
ctggtagctg ctggagatga tgtcttgag gaccaggaga tattaatgca tcaccaccc  
1320  
caagtggatg aactt  
1335

<210> 4674



&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 4671

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accggtccag ggcattcagg tgttctcca ggcccaggag agtgctgcac acccgttcca
60
gcaccagcgc catccgcttc gaggttgagc ctctgcagc agtggaatca ggggcctcct
120
ggggctcggc aggggctacc cggctccgct tccgcccagt aatggagact gcagccacgt
180
taggccaggc tgctgcagtg gtttcagcat ctatccgag ggatccacgg ggaagctggt
240
gtgcgccgga taaagatggc aaccgccgat gagattgtga aactcatgct cgaccacatg
300
acaaacacca ccaacgcgtc ccatgtgcct gtgcagcccg gctcctcagt tgtgatgatg
360
gtcaacaacc tgggtggcct gtcattcctg gaactgggca tcatagccga cgctaccgtc
420
cgctccctgg agggccgagg ggtgaagatt gcccggtccc tgggtgggac cttcatgtca
480
gcactggaga tgctggcat ttctctcacc ctctgctgg tggatgagcc tctcctgaaa
540
ctgatagatg ctgaaaccac tgcagcagcc tggcctcgaa gcggatggcg ctggtgctgg
600
aacgggtgtg cagcactctc ctgggcctgg aggaacacct gaatgccctg gaccggt
657

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&lt;210&gt; 4672

&lt;211&gt; 152

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 4672

```

Ala Arg Leu Leu Gln Trp Phe Gln His Leu Ser Ala Gly Ile His Gly
1      5      10      15
Glu Ala Gly Val Arg Arg Ile Lys Met Ala Thr Ala Asp Glu Ile Val
20     25     30
Lys Leu Met Leu Asp His Met Thr Asn Thr Thr Asn Ala Ser His Val
35     40     45
Pro Val Gln Pro Gly Ser Ser Val Val Met Met Val Asn Asn Leu Gly
50     55     60
Gly Leu Ser Phe Leu Glu Leu Gly Ile Ile Ala Asp Ala Thr Val Arg
65     70     75     80
Ser Leu Glu Gly Arg Gly Val Lys Ile Ala Arg Ala Leu Val Gly Thr
85     90     95
Phe Met Ser Ala Leu Glu Met Pro Gly Ile Ser Leu Thr Leu Leu Leu
100    105    110
Val Asp Glu Pro Leu Leu Lys Leu Ile Asp Ala Glu Thr Thr Ala Ala
115    120    125
Ala Trp Pro Arg Ser Gly Trp Arg Trp Cys Trp Asn Gly Cys Ala Ala
130    135    140
Leu Ser Trp Ala Trp Arg Asn Thr
145    150

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<400> 4669  
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 120  
 gacatgaaca taaaaaaaca gattcaggaa cagcaccagg ctgccattat tattcagaag  
 180  
 cattgtaaag cctttaaaat aaggaagcat tatctccaca ttagagcaac agtagtttct  
 240  
 attcaaagaa gatacagaaa actaactgca gtgcgtaccc aagcagttat ttgtatacag  
 300  
 tcttattaca gaggccttaa agtacgaaa gatattcaaa atatgcaccg ggctgccaca  
 360  
 ctaattcagt cattctatcg aatgcacagg gccaaagttg attattaaac aaagaaaact  
 420  
 gcaattgtgg ttatacagaa ttattatagg ttgtatgta gagtaaaaaac agaaagaaaa  
 480  
 aacttttttag cagttcagaa atctgtccga actattcagg ctgcttttag aggcataaaa  
 540  
 gttagacaaa aattgaaaaa atgtatcaga ggaaaagatg gcagccattg ttaaccaatc  
 600  
 tgcactctgc tgttacagaa gtaaaactca gtatgaagct gttcaaagtg aaggtgttat  
 660  
 gattcaagag tggataaaag ctt  
 683

<210> 4670  
 <211> 135  
 <212> PRT  
 <213> Homo sapiens

<400> 4670  
 Xaa Ser Phe Ser Gly Leu Arg Gly Ile Ile Gln Glu Lys Tyr Arg Ala  
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 Asn Lys Lys Lys Gln Lys Val Phe Gln His Asn Glu Leu Lys Lys Glu  
 20 25 30  
 Thr Cys Val Gln Ala Gly Phe Gln Asp Met Asn Ile Lys Lys Gln Ile  
 35 40 45  
 Gln Glu Gln His Gln Ala Ala Ile Ile Ile Gln Lys His Cys Lys Ala  
 50 55 60  
 Phe Lys Ile Arg Lys His Tyr Leu His Ile Arg Ala Thr Val Val Ser  
 65 70 75 80  
 Ile Gln Arg Arg Tyr Arg Lys Leu Thr Ala Val Arg Thr Gln Ala Val  
 85 90 95  
 Ile Cys Ile Gln Ser Tyr Tyr Arg Gly Phe Lys Val Arg Lys Asp Ile  
 100 105 110  
 Gln Asn Met His Arg Ala Ala Thr Leu Ile Gln Ser Phe Tyr Arg Met  
 115 120 125  
 His Arg Ala Lys Val Asp Tyr  
 130 135

<210> 4671  
 <211> 657

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 660  
 caattcctac ctgttttctg agtgcagtcc tagcaggtga agcaaggtga tgccttgcc  
 720  
 aagaagttgc attcctgtct gctttgcac tgctactttg ctgcagtttg gattcagagc  
 780  
 agaatggacc ccactctgtc gaggtgacct gaagggaaac gccaggctct gtagcagcag  
 840  
 agggcaaggt tccaaggtgt aaaggtcatg ctgctagcac attattaaaa atcagtctgg  
 900  
 gtgcaatggc tcacagctat aatcccgatg ctttggggagg tctaggtagg agggttgctt  
 960  
 gaagccaagc atttgagacc agcctaggcg aaaaagagag actcagtctc tacaacaaaa  
 1020  
 aaaaaaaaaa a  
 1031

&lt;210&gt; 4668

&lt;211&gt; 207

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 4668

Xaa	Ala	Met	Gly	Thr	Ser	Leu	Tyr	Ala	Pro	Glu	Val	Cys	Asn	Cys	Ser
1				5					10					15	
Ala	Pro	Asp	Thr	Gly	Asn	Met	Glu	Leu	Leu	Val	Arg	Tyr	Gly	Thr	Glu
		20					25						30		
Ala	Gln	Lys	Ala	Arg	Trp	Leu	Ile	Pro	Leu	Leu	Glu	Gly	Lys	Ala	Arg
		35				40						45			
Ser	Cys	Phe	Ala	Met	Thr	Glu	Pro	Gln	Val	Ala	Ser	Ser	Asp	Ala	Thr
	50					55					60				
Asn	Ile	Glu	Ala	Ser	Ile	Arg	Glu	Glu	Asp	Ser	Phe	Tyr	Val	Ile	Asn
					70					75				80	
Gly	His	Lys	Trp	Trp	Ile	Thr	Gly	Ile	Leu	Asp	Pro	Arg	Cys	Gln	Leu
				85				90						95	
Cys	Val	Phe	Met	Gly	Lys	Thr	Asp	Pro	His	Ala	Pro	Arg	His	Arg	Gln
			100					105					110		
Gln	Ser	Val	Leu	Leu	Val	Pro	Met	Asp	Thr	Pro	Gly	Ile	Lys	Ile	Ile
		115					120					125			
Arg	Pro	Leu	Thr	Val	Tyr	Gly	Leu	Glu	Asp	Ala	Pro	Gly	Gly	His	Gly
						135					140				
Glu	Val	Arg	Phe	Glu	His	Val	Arg	Val	Pro	Lys	Glu	Asn	Met	Val	Leu
					150					155				160	
Gly	Pro	Gly	Arg	Gly	Phe	Glu	Ile	Ala	Gln	Gly	Arg	Leu	Gly	Pro	Gly
				165					170					175	
Arg	Ile	His	His	Cys	Met	Arg	Leu	Ile	Gly	Phe	Ser	Glu	Arg	Ala	Leu
			180					185					190		
Ala	Leu	Met	Lys	Ala	Arg	Val	Ser	Ala	Phe	Pro	Arg	Thr	Gln	His	
		195					200					205			

&lt;210&gt; 4669

&lt;211&gt; 683

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

<211> 167  
 <212> PRT  
 <213> Homo sapiens

<400> 4666

Xaa Arg His Glu Gly Gly Ser His Arg Lys Ala Ala Arg Ser Val Ser  
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 Gly Ile Thr Arg Arg Val Phe Met Trp Thr Val Ser Gly Thr Pro Cys  
 20 25 30  
 Arg Glu Phe Trp Ser Arg Phe Arg Lys Glu Lys Glu Pro Val Val Val  
 35 40 45  
 Glu Thr Val Glu Glu Lys Lys Glu Pro Ile Leu Val Cys Pro Pro Leu  
 50 55 60  
 Arg Ser Arg Ala Tyr Thr Pro Pro Glu Asp Leu Gln Ser Arg Leu Glu  
 65 70 75 80  
 Ser Tyr Val Lys Glu Val Phe Gly Ser Ser Leu Pro Ser Asn Trp Gln  
 85 90 95  
 Asp Ile Ser Leu Glu Asp Ser Arg Leu Lys Phe Asn Leu Leu Ala His  
 100 105 110  
 Leu Ala Asp Asp Leu Gly His Val Val Pro Asn Ser Arg Leu His Gln  
 115 120 125  
 Met Cys Arg Val Arg Asp Val Leu Asp Phe Tyr Asn Val Pro Ile Gln  
 130 135 140  
 Asp Arg Ser Lys Phe Asp Glu Leu Ser Ala Ser Asn Leu Pro Pro Asn  
 145 150 155 160  
 Leu Lys Ile Thr Trp Ser Tyr  
 165

<210> 4667  
 <211> 1031  
 <212> DNA  
 <213> Homo sapiens

<400> 4667

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 120  
 cctctgctgg aggggaaagc ccgctcctgt tttgctatga ccgagcccca ggttgccctc  
 180  
 tcagatgcca ccaacattga ggcttccatc agagaggagg acagcttcta tgtcataaac  
 240  
 ggtcacaaat ggtggatcac aggcattcctg gatcctcggt gccaaactctg tgtgtttatg  
 300  
 ggaaaaacag acccacaatgc accaagacac cggcagcagt ctgtgctctt ggttcccatg  
 360  
 gataccccag ggataaaaaat catccggcct ctgacggtgt atggactgga agatgcacca  
 420  
 ggtggccatg gtgaagtccg atttgagcac gtgcgtgtgc ccaaagagaa catggctcctg  
 480  
 ggccctggcc gaggttttga gatcgcccag ggcagactgg gccccggcag gatccatcac  
 540  
 tgcattgaggc tgatcgggtt ctcagagagg gccctggcac tcatgaaggc ccgctgaggt  
 600

	275		280		285	
Glu	Leu	Leu	Gln	Thr	Glu	Asp
	290		295		300	
Lys	Ala	Asp	Ser	Pro	Ser	Ile
305			310		315	
Glu	Lys	Val	Gln	Asn	Lys	His
			325		330	
Arg	Gly	Asp	His	Leu	Asp	Arg
	340		345			

&lt;210&gt; 4665

&lt;211&gt; 1043

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 4665

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nttcggcacg aggggtggatc tcatcgaaag ggggcgcgat ctgtgtcggg cattaccaga
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agagtcttca tgtggacagt ctcagggaca ccatgtagag aatttttggtc tcgattcaga
120
aaagagaaag agccagtggg tgttgagaca gtagaagaga aaaaggaacc tatcctagt
180
tgtccacctt tacgaagccg agcatacaca ccacctgaag atctccagag tcgtttggaa
240
tcttacgtta aagaagtttt tggttcatct cttcctagta attggcaaga catctccctg
300
gaagatagtc gtctaaagtt caatcttctg gctcatttag ctgatgactt gggatcatga
360
gtccctaact ccagactcca ccagatgtgc aggggttagag atgttcttga tttctataat
420
gtccctattc aagatagatc taaatttgat gaactcagtg ccagtaatct gcccccaat
480
ttgaaaatca cttggagtta ctaagcaatt cggaagagaa acacattgaa atcactgtct
540
ttccctgagc aagggggctg ctcattagat cttttgatac tttaccatgt gaaatactac
600
cagaactggt ctctaaaccc actttttctg tagaggaatg tatcatcttt ttttttctca
660
tattacaaat ggacaaataa cggactttct attttcatat ttgctgaaac cattttttaa
720
atgaaattag gtcattatct atgaaaagtt ttgagagggc actgtcaact tgggtttaag
780
acaggaggac attgcaagtt cacacctttc ataagcataa agtagttgca agaaagtatt
840
ttcatcctgt taggattcat atctaagata gagttatgca ttgcacatac acaaataaac
900
ttttattaga tagataccta taaaagaaac ataaaagtat gttgtgtatt actgacagtt
960
ctagattaat ttcttttaga attaaagtag atttggttaa aaaaaaaaaa aaaaaaaaaa
1020
aaaaaaaaaa aaaaaaaaaa aaa
1043

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&lt;210&gt; 4666

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 1320  
 atcaacctct ttctaatacc ctcttgga aaagagcttgcc cctcctcca gcacactaga  
 1380  
 gctctggcct tgtgtgtata tgtatacata cgtgaacaca tgcctgtgtg tgtgtgtgtg  
 1440  
 tgtgtacttg tatgcacgta ggcaccagca caaagatctg aatgatgcac cccaccccca  
 1500  
 cccaataaaa gaaataacag aaaaccctca aaaaaaaaaa aaaaaaaaaa  
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<210> 4664

<211> 347

<212> PRT

<213> Homo sapiens

<400> 4664

Met	Phe	Arg	His	Thr	Asp	Ser	Leu	Phe	Pro	Ile	Leu	Leu	Gln	Thr	Leu
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Ser	Asp	Glu	Ser	Asp	Glu	Val	Ile	Leu	Lys	Asp	Leu	Glu	Val	Leu	Ala
		20						25					30		
Glu	Ile	Ala	Ser	Ser	Pro	Ala	Gly	Gln	Thr	Asp	Asp	Pro	Gly	Pro	Leu
		35					40					45			
Asp	Gly	Pro	Asp	Leu	Gln	Ala	Ser	His	Ser	Glu	Leu	Gln	Val	Pro	Thr
	50					55					60				
Pro	Gly	Arg	Ala	Gly	Leu	Leu	Asn	Thr	Ser	Gly	Thr	Lys	Gly	Leu	Glu
	65				70					75				80	
Cys	Ser	Pro	Ser	Thr	Pro	Thr	Met	Asn	Ser	Tyr	Phe	Tyr	Lys	Phe	Met
				85					90					95	
Ile	Asn	Leu	Leu	Lys	Arg	Phe	Ser	Ser	Glu	Arg	Lys	Leu	Leu	Glu	Val
			100					105					110		
Arg	Gly	Pro	Phe	Ile	Ile	Arg	Gln	Leu	Cys	Leu	Leu	Leu	Asn	Ala	Glu
		115					120					125			
Asn	Ile	Phe	His	Ser	Met	Ala	Asp	Ile	Leu	Leu	Arg	Glu	Glu	Asp	Leu
	130					135					140				
Lys	Phe	Ala	Ser	Thr	Met	Val	His	Ala	Leu	Asn	Thr	Ile	Leu	Leu	Thr
	145				150					155				160	
Ser	Thr	Glu	Leu	Phe	Gln	Leu	Arg	Asn	Gln	Leu	Lys	Asp	Leu	Lys	Thr
			165						170					175	
Leu	Glu	Ser	Gln	Asn	Leu	Phe	Cys	Cys	Leu	Tyr	Arg	Ser	Trp	Cys	His
		180						185					190		
Asn	Pro	Val	Thr	Thr	Val	Ser	Leu	Cys	Phe	Leu	Thr	Gln	Asn	Tyr	Arg
		195					200						205		
His	Ala	Tyr	Asp	Leu	Ile	Gln	Lys	Phe	Gly	Asp	Leu	Glu	Val	Thr	Val
	210					215					220				
Asp	Phe	Leu	Ala	Glu	Val	Asp	Lys	Leu	Val	Gln	Leu	Ile	Glu	Cys	Pro
	225				230					235				240	
Ile	Phe	Thr	Tyr	Leu	Arg	Leu	Gln	Leu	Leu	Asp	Val	Lys	Asn	Asn	Pro
			245					250						255	
Tyr	Leu	Ile	Lys	Ala	Leu	Tyr	Gly	Leu	Leu	Met	Leu	Leu	Pro	Gln	Ser
		260					265						270		
Ser	Ala	Phe	Gln	Leu	Leu	Ser	His	Arg	Leu	Gln	Cys	Val	Pro	Asn	Pro

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<210> 4663
<211> 1550
<212> DNA
<213> Homo sapiens
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3856

tttccttttt. cttttttttt ttg

864

<210> 4660

<211> 192

<212> PRT

<213> Homo sapiens

<400> 4660

Met Pro Ser Val Val Leu Lys His Ile His His Ile Ser Val Ala Lys  
 1 5 10 15  
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 20 25 30  
 Ser Val Arg Ala Phe His His Gln Phe Leu Glu Ser Thr His Gly Ser  
 35 40 45  
 Pro Ser Val Asp Ile Ser Leu Asp Leu Ala Lys Ser Thr Met Arg Thr  
 50 55 60  
 Ala Lys Ser Cys His Ile Val Ile Thr Asn Arg Ser Arg Asp Ala Ile  
 65 70 75 80  
 Ser Gly Pro Val Glu Ser Pro His Cys Asp Ala Cys Ser Thr Gln Thr  
 85 90 95  
 Ala Phe Ile His Ile Ser Cys Asn Leu Thr Pro Lys Ala Arg Glu Thr  
 100 105 110  
 Lys Cys Ala Thr Glu Thr Asp Ser Ala Val Ala Glu Thr Val Thr His  
 115 120 125  
 Ala Cys Leu Pro Val Gly Val Leu Gly Gly Arg Thr Gly Thr Asp Ser  
 130 135 140  
 Arg Leu Gly His Asn Asp His Arg Arg Leu Ser Leu His Phe Gln Cys  
 145 150 155 160  
 Arg Ala Phe His Val Val Phe Ile Cys Gly Glu Ile Leu Ser Gln Ala  
 165 170 175  
 Thr Arg His Phe Leu Leu Gly Thr Leu Phe Thr Asn Phe His Cys Phe  
 180 185 190

<210> 4661

<211> 153

<212> DNA

<213> Homo sapiens

<400> 4661

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 aaacacagcc atgaacagag tgaccgggga gaaggggtgg aggtcgtcca gaatgagccc  
 120  
 tttaggacc ctcaccatgg ccatgggcag ttc  
 153

<210> 4662

<211> 51

<212> PRT

<213> Homo sapiens

<400> 4662

Arg Ile Cys Met Pro Leu Thr Val Asp Glu Tyr Lys Ile Gly Gln Leu



85 90 95  
 Val Asp Cys Ser Asp Cys Trp Leu Pro Val Val Lys Phe Ile Glu Glu  
 100 105 110  
 Gln Phe Glu Gln Tyr Leu Arg Asp Glu Ser Gly Leu Asn Arg Lys Asn  
 115 120 125  
 Ile Gln Asp Ser Arg Val His Cys Cys Leu Tyr Phe Ile Ser Pro Phe  
 130 135 140  
 Gly Arg Ala Pro Ala Pro Arg Cys Gly Phe Leu Arg Ala Ile His Glu  
 145 150 155 160  
 Lys Val Asn Ile Ile Pro Val Ile Gly Lys Ala Asp Ala Leu Met Pro  
 165 170 175  
 Gln Glu Thr Gln Ala Leu Lys Gln Lys Ile Arg Asp Gln Leu Lys Glu  
 180 185 190  
 Glu Glu Ile His Ile Tyr Gln Phe Pro Glu Cys Asp Ser Asp Glu Asp  
 195 200 205  
 Glu Asp Phe Lys Arg Gln Asp Ala Glu Met Lys Glu Ser Ile Pro Phe  
 210 215 220  
 Ala Val Val Gly Ser Cys Glu Val Val  
 225 230

&lt;210&gt; 4659

&lt;211&gt; 864

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 4659

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 60  
 agagaatctc accacaaatg aaaactacgt gaaaggccct gcaactgaaaa tgcaagctca  
 120  
 ggccgcgggtg gtcgttgtga cccaacctgg agtcgggtccc ggtccggccc ccagaaactc  
 180  
 caactggcag acaggcatgt gtgactgttt cagcgactgc ggagtctgtc tctgtggcac  
 240  
 attttgtttc ccgtgccttg ggtgtcaagt tgcagctgat atgaatgaat gctgtctgtg  
 300  
 tggaacaagc gtcgcaatga ggactctcta caggaccgga tatggcatcc ctggatctat  
 360  
 ttgtgatgac tatatggcaa ctctttgctg tcttcattgt actctttgcc aaatcaagag  
 420  
 agatatcaac agaaggagag ccatgcgtac ttctataaaa ctgatgggtga aaagctctta  
 480  
 ccgaagcaac aaaattcagc agacacctct tcagcttgag ttcttcacca tcttttgcaa  
 540  
 ctgaaatatz atggatatgc ttaagtacaa ctgatggcat gaaaaaaatc aaatttttga  
 600  
 tttattataa atgaatgttg tccctgaact tagctaaatz gtgcaactta gtttctcctt  
 660  
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 Gly Arg Gln His His Gly Arg Pro  
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<210> 4657  
 <211> 723  
 <212> DNA  
 <213> Homo sapiens

<400> 4657  
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 gagtcaggcc tagggaaatc caccctcatc aacagcctct tcctcaccaa cctctatgag  
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 gatcgccagg tgccagaggc cagtgtctgc ttgacacaga ccctggccat tgagcgccgg  
 240  
 ggcgtagaga ttgaggaagg ggggtgtgaaa gtgaagctga cccttgtgga cacacctggc  
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 360  
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 420  
 cgagtccact gctgectcta cttcatctca cccttcggcc gggctccggc ccctagatgt  
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 ggcttccctcc gggcaataca cgagaaagtc aacatcatcc cagtcattgg caaagcggat  
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 gccctgatgc ccaggaaac ccaggccctc aagcagaaga tccgggatca gttgaaggaa  
 600  
 gaggagatcc acatctacca gttccccgaa tgtgactctg atgaagatga agacttcaag  
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 720  
 gta  
 723

<210> 4658  
 <211> 233  
 <212> PRT  
 <213> Homo sapiens

<400> 4658  
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 Arg Lys Ser Val Lys Lys Gly Phe Asp Phe Thr Leu Met Val Ala Gly  
 20 25 30  
 Glu Ser Gly Leu Gly Lys Ser Thr Leu Ile Asn Ser Leu Phe Leu Thr  
 35 40 45  
 Asn Leu Tyr Glu Asp Arg Gln Val Pro Glu Ala Ser Ala Arg Leu Thr  
 50 55 60  
 Gln Thr Leu Ala Ile Glu Arg Arg Gly Val Glu Ile Glu Glu Gly Gly  
 65 70 75 80  
 Val Lys Val Lys Leu Thr Leu Val Asp Thr Pro Gly Phe Gly Asp Ser

195	200	205
Leu Lys Lys Ala Ser Lys Glu Ile Tyr Gln Leu Arg Gly Gln Ser His		
210	215	220
Lys Glu Pro Ile Gln Val Gln Thr Phe Arg Glu Lys Ile Ala Phe Phe		
225	230	235
Thr Arg Pro Arg Ile Asn Ile Pro Pro Leu Pro Ala Asp Asp Val		240
245	250	255

&lt;210&gt; 4655

&lt;211&gt; 456

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 4655

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caggtagcgc tccatgacgg ccatgctgcc catgatcacc agcgtggtca ggcacacgtg  
420  
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456

&lt;210&gt; 4656

&lt;211&gt; 152

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 4656

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Ala Val Gln Arg His Glu Gln Gln Glu Gln Ala Gly His Thr His Arg		
20	25	30
Gln Gln Gln Arg Gln Arg Leu Ala Arg His Gly Val Arg Arg Ala Ala		
35	40	45
Pro Arg Arg Leu Val Val Leu Glu Asp Glu Val Glu Leu Asp Leu Gln		
50	55	60
His Glu Asp Val Lys Glu Pro Gln Asp His Gly Val Ala Ala Leu Gly		
65	70	75
Arg Ala His Leu Gly Ala His Pro His Gly His Val Ala Gln His Gln		
85	90	95
Gln Glu Ala His Val Ala His Gln His Asp Asp Ala His Ala Asp Leu		
100	105	110
Ala Arg Ala Leu Val Leu Leu His Gln Val Arg Val His Asp Gly His		
115	120	125
Ala Ala His Asp His Gln Arg Gly Gln Ala His Val Ala Pro Val Arg		

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 1276

&lt;210&gt; 4654

&lt;211&gt; 255

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 4654

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			20					25					30		
Glu	Thr	Asn	Thr	Glu	Asp	Leu	Phe	Leu	Glu	Glu	Ala	Ala	Ser	Leu	Val
		35				40					45				
Lys	Glu	Arg	Pro	Ser	Arg	Arg	Ala	Arg	Gly	Ser	Pro	Phe	Val	Arg	Ser
	50				55					60					
Gly	Thr	Ile	Val	Arg	Ser	Gln	Thr	Phe	Ser	Pro	Gly	Ala	Arg	Ser	Gln
65				70					75					80	
Tyr	Val	Cys	Arg	Leu	Tyr	Arg	Ser	Asp	Ser	Asp	Ser	Ser	Thr	Leu	Pro
			85					90					95		
Arg	Lys	Ser	Pro	Phe	Val	Arg	Asn	Thr	Leu	Glu	Arg	Arg	Thr	Leu	Arg
		100					105						110		
Tyr	Lys	Gln	Ser	Cys	Arg	Ser	Ser	Leu	Ala	Glu	Leu	Met	Ala	Arg	Thr
		115				120					125				
Ser	Leu	Asp	Leu	Glu	Leu	Asp	Leu	Gln	Ala	Ser	Arg	Thr	Arg	Gln	Arg
	130				135					140					
Gln	Leu	Asn	Glu	Glu	Leu	Cys	Ala	Leu	Arg	Glu	Leu	Arg	Gln	Arg	Leu
145			150						155				160		
Glu	Asp	Ala	Gln	Leu	Arg	Gly	Gln	Thr	Asp	Leu	Pro	Pro	Trp	Val	Leu
		165					170						175		
Arg	Asp	Glu	Arg	Leu	Arg	Gly	Leu	Leu	Arg	Glu	Ala	Glu	Arg	Gln	Thr
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<400> 4653
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660

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&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 4651

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869

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&lt;210&gt; 4652

&lt;211&gt; 289

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 4652

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Xaa Ala Arg Thr Phe Pro Glu Cys Thr Pro Arg Pro Pro Ala Gly Ala
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Met Ala Gly Leu Trp Leu Gly Leu Val Trp Gln Lys Leu Leu Leu Trp
20           25           30
Gly Ala Ala Ser Ala Val Ser Leu Ala Gly Ala Ser Leu Val Leu Ser
35           40           45
Leu Leu Gln Arg Val Ala Ser Tyr Ala Arg Lys Trp Gln Gln Met Arg
50           55           60
Pro Ile Pro Thr Val Ala Arg Ala Tyr Pro Leu Val Gly His Ala Leu
65           70           75           80
Leu Met Lys Pro Asp Gly Arg Glu Phe Phe Gln Gln Ile Ile Glu Tyr
85           90           95
Thr Glu Glu Tyr Arg His Met Pro Leu Leu Lys Leu Trp Val Gly Pro

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565 570 575  
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 580 585 590  
 Arg Arg Leu Leu Leu Ser Leu Leu Ser Met Phe Tyr Cys Lys Glu Ile  
 595 600 605  
 Glu Glu Asp Tyr Tyr Ser Leu Ala Pro Gly Asp Thr Tyr Tyr Ile Pro  
 610 615 620  
 Pro His Gly Ser Tyr Gln Ser Tyr Ile Asp Tyr Leu Arg Asn Leu Pro  
 625 630 635 640  
 Ile Thr Ala His Pro Glu Val Phe Gly Leu His Glu Asn Ala Asp Ile  
 645 650 655  
 Thr Lys Asp Asn Gln Glu Thr Asn Gln Leu Phe Glu Gly Val Leu Leu  
 660 665 670  
 Thr Leu Pro Arg Gln Ser Gly Gly Ser Gly Lys Ser Pro Gln Glu Val  
 675 680 685  
 Val Glu Glu Leu Ala Gln Asp Ile Leu Ser Lys Leu Pro Arg Asp Phe  
 690 695 700  
 Asp Leu Glu Glu Val Met Lys Leu Tyr Pro Val Val Tyr Glu Glu Ser  
 705 710 715 720  
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 740 745 750  
 Gln Val Leu Met Ser Ser Glu Leu Glu Glu Val Phe Asn Ser Met Leu  
 755 760 765  
 Val Gly Lys Val Pro Ala Met Trp Ala Ala Lys Ser Tyr Pro Ser Leu  
 770 775 780  
 Lys Pro Leu Gly Gly Tyr Val Ala Asp Leu Leu Ala Arg Leu Thr Phe  
 785 790 795 800  
 Phe Gln Glu Trp Ile Asp Lys Gly Pro Pro Val Val Phe Trp Ile Ser  
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 820 825 830  
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 850 855 860  
 Tyr Ile Lys Gly Leu Phe Leu Glu Gly Ala Arg Trp Asp Arg Lys Thr  
 865 870 875 880  
 Met Gln Ile Gly Glu Ser Leu Pro Lys Ile Leu Tyr Asp Pro Leu Pro  
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 900 905 910  
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 Ser Thr Thr Gly His Ser Thr Asn Tyr Val Leu Ser Ile Glu Leu Pro  
 930 935 940  
 Thr Asp Met Pro Gln Lys His Trp Ile Asn Arg Gly Val Ala Ser Leu  
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 Cys Gln Leu Asp Asn  
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&lt;210&gt; 4651

&lt;211&gt; 869

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 165 170 175  
 Leu Tyr Met His Ser Leu Thr His Ser Thr Lys Ser Glu Glu Leu Asn  
 180 185 190  
 Leu Arg Ile Lys Tyr Ile Ile Asp His Phe Thr Leu Ser Ile Tyr Asn  
 195 200 205  
 Asn Val Cys Arg Ser Leu Phe Glu Lys Asp Lys Leu Leu Phe Ser Leu  
 210 215 220  
 Leu Leu Thr Ile Gly Ile Met Lys Gln Lys Lys Glu Ile Thr Glu Glu  
 225 230 235 240  
 Val Trp Tyr Phe Leu Leu Thr Gly Gly Ile Ala Leu Asp Asn Pro Tyr  
 245 250 255  
 Pro Asn Pro Ala Pro Gln Trp Leu Ser Glu Lys Ala Trp Ala Glu Ile  
 260 265 270  
 Val Arg Ala Ser Ala Leu Pro Lys Leu His Gly Leu Met Glu His Leu  
 275 280 285  
 Glu Gln Asn Leu Gly Glu Trp Lys Leu Ile Tyr Asp Ser Ala Trp Pro  
 290 295 300  
 His Glu Glu Gln Leu Pro Gly Ser Trp Lys Phe Ser Gln Gly Leu Glu  
 305 310 315 320  
 Lys Met Val Ile Leu Arg Cys Leu Arg Pro Asp Lys Met Val Pro Ala  
 325 330 335  
 Val Arg Glu Phe Ile Ala Glu His Met Gly Lys Leu Tyr Ile Glu Ala  
 340 345 350  
 Pro Thr Phe Asp Leu Gln Gly Ser Tyr Asn Asp Ser Ser Cys Cys Ala  
 355 360 365  
 Pro Leu Ile Phe Val Leu Ser Pro Ser Ala Asp Pro Met Ala Gly Leu  
 370 375 380  
 Leu Lys Phe Ala Asp Asp Leu Gly Met Gly Gly Thr Arg Thr Gln Thr  
 385 390 395 400  
 Ile Ser Leu Gly Gln Gly Gln Gly Pro Ile Ala Ala Lys Met Ile Asn  
 405 410 415  
 Asn Ala Ile Lys Asp Gly Thr Trp Val Val Leu Gln Asn Cys His Leu  
 420 425 430  
 Ala Ala Ser Trp Met Pro Thr Leu Glu Lys Ile Cys Glu Glu Val Ile  
 435 440 445  
 Val Pro Glu Ser Thr Asn Ala Arg Phe Arg Leu Trp Leu Thr Ser Tyr  
 450 455 460  
 Pro Ser Glu Lys Phe Pro Val Ser Ile Leu Gln Asn Gly Ile Lys Met  
 465 470 475 480  
 Thr Asn Glu Pro Pro Lys Gly Leu Arg Ala Asn Leu Leu Arg Ser Tyr  
 485 490 495  
 Leu Asn Asp Pro Ile Ser Asp Pro Val Phe Phe Gln Ser Cys Ala Lys  
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 Ala Val Met Trp Gln Lys Met Leu Phe Gly Leu Cys Phe Phe His Ala  
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 Tyr Glu Phe Asn Glu Ser Asp Leu Arg Ile Ser Met Trp Gln Ile Gln  
 545 550 555 560  
 Met Phe Leu Asn Asp Tyr Lys Glu Val Pro Phe Asp Ala Leu Thr Tyr



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&lt;210&gt; 4650

&lt;211&gt; 965

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 4650

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			20						25				30		
Glu	Val	Ala	Val	Lys	Val	Cys	Leu	Leu	Asn	Phe	Met	Ile	Thr	Pro	Leu
		35					40					45			
Gly	Leu	Gln	Asp	Gln	Leu	Leu	Gly	Ile	Val	Ala	Ala	Lys	Glu	Lys	Pro
	50				55					60					
Glu	Leu	Glu	Glu	Lys	Lys	Asn	Gln	Leu	Ile	Val	Glu	Ser	Ala	Lys	Asn
65				70					75					80	
Lys	Lys	His	Leu	Lys	Glu	Ile	Glu	Asp	Lys	Ile	Leu	Glu	Val	Leu	Ser
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			100					105					110		
Ser	Ser	Ser	Lys	Val	Leu	Ser	Glu	Glu	Ile	Ser	Glu	Lys	Gln	Lys	Val
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2400

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Arg Thr Ile Leu Met Arg Lys Glu Gly Glu Ser Ala Lys Ser Ile Asn
65      70      75      80
Glu Met Leu Leu Ser Arg Leu Ser Arg Tyr Arg Ala Ser Pro Ser Ala
      85      90      95
Thr Leu Ala Ala Leu Thr Gly Ser Thr Ile Ser Asn Thr Leu Lys Glu
      100      105      110
Asp Gln Ala Ala Asn Thr Ser Cys Gly Leu Pro Leu Lys Met Leu Arg
      115      120      125
Lys Thr Pro Ile Tyr Thr Cys Gly Thr Tyr Leu Val Met Leu Val Pro
      130      135      140
Pro Pro Gly Gly Ser Gly Ser Ser Ala Thr Arg Ser Leu Phe Gly Gly
145      150      155      160
Thr Ser Gly Leu Ser Ser Leu Lys Ile Leu Ala Ser Ser Leu Val Tyr
      165      170      175
Asn Ile Ser Asp Gly Gln Phe Thr Ser Arg Ala Asp
      180      185

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&lt;210&gt; 4649

&lt;211&gt; 3276

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 4649

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120
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180
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240
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300
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360
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420
gccgtgaagg tctgtctcct caacttcatg atcacccctc tgggtctcca agatcaactc
480
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660
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720
cagattgacg agactcggat gggctacaag ccagtggctg tgcattctgc caccatcttc
780

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290                      295                      300  
 Gly Leu Pro Asn Phe Asp Asn Asn Asn Ile Lys Gly Ser Leu Ile Ile  
 305                      310                      315                      320  
 Thr Phe Asp Val Asp Phe Pro Lys Glu Gln Leu Thr Glu Glu Ala Arg  
                     325                      330                      335  
 Glu Gly Ile Lys Gln Leu Leu Lys Gln Gly Ser Val Gln Lys Val Tyr  
                     340                      345                      350  
 Asn Gly Leu Gln Gly Tyr  
                     355

&lt;210&gt; 4647

&lt;211&gt; 791

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 4647

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 120  
 gatccccctg gaggaggcac cagcatcacc aagtaggtgc cacaggtata tatgggtgtc  
 180  
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 240  
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 360  
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 420  
 tcaaaaatgt ccatgaagac agaatgtccc ttcgggtgtt tctcattcag gctggcagga  
 480  
 gaccagatcc aatagaagta agtgccatct gaagacaggt gcacagtgc catggtgctg  
 540  
 ccaatgggga ggtgattggc tggcattggc accacctggc acacctgaag ggtgttctgg  
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 660  
 ctgccgctgc caaaagccac ccactctggt tccaactcct cgttcggga gtacacaaaa  
 720  
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 780  
 gtagtataca g  
 791

&lt;210&gt; 4648

&lt;211&gt; 188

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 4648

Met Pro Ala Asn His Leu Pro Ile Gly Ser Thr Met Ser Thr Val His  
 1                      5                      10                      15  
 Leu Ser Ser Asp Gly Thr Tyr Phe Tyr Trp Ile Trp Ser Pro Ala Ser

taagagggct taagaatttg tccatttgca ttcggaaaag aatgaccagc aaaagggtta  
 1500  
 ctaatacctc tccctttggg gatttaatgt ctggtgctgc cgcttgagtt tcaagaatta  
 1560  
 aagctgcaag aggactccag gagcaaaaga aacacaatat agagggttgg agttgttagc  
 1620  
 aatttcattc aaaatgccaa ctggagaagt ctgtttttaa atacattttg ttgttatttt  
 1680  
 taaaaaaaa aaaaaaaaa aaaaaaaaa aaaaaaaaa aaaaa  
 1725

<210> 4646

<211> 358

<212> PRT

<213> Homo sapiens

<400> 4646

Met Ala Pro Gln Asn Leu Ser Thr Phe Cys Leu Leu Leu Tyr Leu  
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 20 25 30  
 Pro Arg Ser Ala Ser Ile Lys Asp Ile Lys Lys Ala Tyr Arg Lys Leu  
 35 40 45  
 Ala Leu Gln Leu His Pro Asp Arg Asn Pro Asp Asp Pro Gln Ala Gln  
 50 55 60  
 Glu Lys Phe Gln Asp Leu Gly Ala Ala Tyr Glu Val Leu Ser Asp Ser  
 65 70 75 80  
 Glu Lys Arg Lys Gln Tyr Asp Thr Tyr Gly Glu Glu Gly Leu Lys Asp  
 85 90 95  
 Gly His Gln Ser Ser His Gly Asp Ile Phe Ser His Phe Phe Gly Asp  
 100 105 110  
 Phe Gly Phe Met Phe Gly Gly Thr Pro Arg Gln Gln Asp Arg Asn Ile  
 115 120 125  
 Pro Arg Gly Ser Asp Ile Ile Val Asp Leu Glu Val Thr Leu Glu Glu  
 130 135 140  
 Val Tyr Ala Gly Asn Phe Val Glu Val Val Arg Asn Lys Pro Val Ala  
 145 150 155 160  
 Arg Gln Ala Pro Gly Lys Arg Lys Cys Asn Cys Arg Gln Glu Met Arg  
 165 170 175  
 Thr Thr Gln Leu Gly Pro Gly Arg Phe Gln Met Thr Gln Glu Val Val  
 180 185 190  
 Cys Asp Glu Cys Pro Asn Val Lys Leu Val Asn Glu Glu Arg Thr Leu  
 195 200 205  
 Glu Val Glu Ile Glu Pro Gly Val Arg Asp Gly Met Glu Tyr Pro Phe  
 210 215 220  
 Ile Gly Glu Gly Glu Pro His Val Asp Gly Glu Pro Gly Asp Leu Arg  
 225 230 235 240  
 Phe Arg Ile Lys Val Val Lys His Pro Ile Phe Glu Arg Arg Gly Asp  
 245 250 255  
 Asp Leu Tyr Thr Asn Val Thr Ile Ser Leu Val Glu Ser Leu Val Gly  
 260 265 270  
 Phe Glu Met Asp Ile Thr His Leu Asp Gly His Lys Val His Ile Ser  
 275 280 285  
 Arg Asp Lys Ile Thr Arg Pro Gly Ala Lys Leu Trp Lys Lys Gly Glu

&lt;210&gt; 4645

&lt;211&gt; 1725

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 4645

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gcagaagagg gggctagcta gctgtctctg cggaccaggg agacccccgc gcccccccg  
120  
tgtgaggcgg cctcacaggg ccgggtgggc tggcgagccg acgcggcggc ggaggaggct  
180  
gtgaggagtg tgtggaacag gaccggggac agaggaacca tggctccgca gaacctgagc  
240  
accttttgcc tgttctgctg atacctcatc ggggcgggtga ttgccggacg agatttctat  
300  
aagatcttgg gggcgcctcg aagtgcctct ataaaggata ttaaaaaggc ctataggaaa  
360  
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420  
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480  
acttatgggtg aagaaggatt aaaagatggg catcagagct cccatggaga cattttttca  
540  
cacttctttg gggatttttg tttcatgttt ggaggaaccc ctgcgtcagca agacagaaat  
600  
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660  
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720  
aagtgcaatt gtcggcaaga gatgcggacc acccagctgg gccctgggcg cttccaaatg  
780  
accaggaggg tggctctgca cgaatgccct aatgtcaaac tagtgaatga agaacgaacg  
840  
ctggaagtag aaatagagcc tggggtgaga gacggcatgg agtaccctt tattggagaa  
900  
ggtgagcctc acgtggatgg ggagcctgga gatttacggg tccgaatcaa agttgtcaag  
960  
cacccaatat ttgaaaggag aggagatgat ttgtacacaa atgtgacaat ctcattagtt  
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gagtcactgg ttggctttga gatggatatt actcacttgg atggtcacaa ggtacatatt  
1080  
tcccgggata agatcaccag gccaggagcg aagctatgga agaaagggga agggctcccc  
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1320  
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1380  
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1440

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 840  
 ctgctcgtga cgggggggtgc agagctgggg tacgggtgca aggccagtcg gagcaccccc  
 900  
 gtggaagccc ccgatatccc ttctgattt ctctcatttc tacttggggc ccccttccta  
 960  
 ggactctccc accccaaact ccaacctgta tcagatgcag cccccaagcc cttagactct  
 1020  
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 1080  
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 1125

<210> 4644

<211> 270

<212> PRT

<213> Homo sapiens

<400> 4644

Met	Ala	Thr	Gly	Thr	Arg	Tyr	Ala	Gly	Lys	Val	Val	Val	Val	Thr	Gly
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Gly	Gly	Arg	Gly	Ile	Gly	Ala	Gly	Ile	Val	Arg	Ala	Phe	Val	Asp	Ser
			20					25					30		
Gly	Ala	Arg	Val	Val	Ile	Cys	Asp	Lys	Asp	Glu	Ser	Gly	Gly	Arg	Ala
			35					40					45		
Leu	Glu	Gln	Glu	Leu	Pro	Gly	Ala	Val	Phe	Ile	Leu	Cys	Asp	Val	Thr
			50					55				60			
Gln	Glu	Asp	Asp	Met	Lys	Thr	Leu	Val	Ser	Glu	Thr	Ile	Arg	Arg	Phe
65					70					75				80	
Gly	Arg	Leu	Asp	Cys	Val	Val	Asn	Asn	Ala	Gly	His	His	Pro	Pro	Pro
				85					90					95	
Gln	Arg	Pro	Glu	Glu	Thr	Ser	Ala	Gln	Gly	Phe	Arg	Gln	Leu	Leu	Glu
			100					105					110		
Leu	Asn	Leu	Leu	Gly	Thr	Tyr	Thr	Leu	Thr	Lys	Leu	Ala	Leu	Pro	Tyr
			115					120					125		
Leu	Arg	Lys	Ser	Gln	Gly	Asn	Val	Ile	Asn	Ile	Ser	Ser	Leu	Val	Gly
			130					135					140		
Ala	Ile	Gly	Gln	Ala	Gln	Ala	Val	Pro	Tyr	Val	Ala	Thr	Lys	Gly	Ala
145					150					155				160	
Val	Thr	Ala	Met	Thr	Lys	Ala	Leu	Ala	Leu	Asp	Glu	Ser	Pro	Tyr	Gly
				165					170					175	
Val	Arg	Val	Asn	Cys	Ile	Ser	Pro	Gly	Asn	Ile	Trp	Thr	Pro	Leu	Trp
			180					185					190		
Glu	Glu	Leu	Ala	Ala	Leu	Met	Pro	Asp	Pro	Arg	Ala	Thr	Ile	Arg	Glu
			195				200					205			
Gly	Met	Leu	Ala	Gln	Pro	Leu	Gly	Arg	Met	Gly	Gln	Pro	Ala	Glu	Val
			210				215					220			
Gly	Ala	Ala	Ala	Val	Phe	Leu	Ala	Ser	Glu	Ala	Asn	Phe	Cys	Thr	Gly
225					230					235				240	
Ile	Glu	Leu	Leu	Val	Thr	Gly	Gly	Ala	Glu	Leu	Gly	Tyr	Gly	Cys	Lys
				245					250					255	
Ala	Ser	Arg	Ser	Thr	Pro	Val	Asp	Ala	Pro	Asp	Ile	Pro	Ser		
			260					265					270		

145                      150                      155                      160  
 Gly Ala Ala Phe Gln Glu Asp Asp Val Ile Met Leu Asn Gly Thr Lys  
                                  165                      170                      175  
 Glu Asp Val Asp Val Leu Lys Thr Arg Met Glu Glu Arg Arg Leu Arg  
                                  180                      185                      190  
 Ala Lys Leu Glu Lys Lys Thr Lys Lys Pro Lys Ala Ala Glu Ser Val  
                                  195                      200                      205  
 Ser Lys Pro Asp Val Ser Glu Glu Ala Pro Gly Pro Ser Lys Val Lys  
                                  210                      215                      220  
 Thr Gly Lys Pro Glu Glu Ala Ser Leu Asp Ser Arg Glu Lys Lys Thr  
 225                                   230                                   235                                   240  
 Asn Leu Ala Pro Lys Ser Thr Ala Met Asn Glu Ser Ser Ser Gly Lys  
                                  245                                   250                                   255  
 Ala Gly Lys Pro Pro Cys Gly Ala Thr Lys Arg Ser Ile Ala Asp Ser  
                                  260                                   265                                   270  
 Glu Glu Ser Glu Ala Tyr Lys Ser Leu Phe Thr Thr His Ser Ser Ala  
                                  275                                   280                                   285  
 Lys Arg Ser Lys Glu Glu Ser Ala His Trp Val Thr His Thr Ser Tyr  
                                  290                                   295                                   300  
 Cys Phe  
 305

&lt;210&gt; 4643

&lt;211&gt; 1125

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 4643

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 120  
 acgggaacgc gctatgccgg gaaggtggtg gtcgtgaccg ggggcgggcg cggcatcgga  
 180  
 gctgggatcg tgcgcgcctt cgtggacagc ggggcccagag tggttatctg cgacaaggat  
 240  
 gagtctgggg gccgggccct ggagcaggag ctccctggag ctgtctttat cctctgtgat  
 300  
 gtgactcagg aagatgatat gaagaccctg gtttctgaga ccatccgccg atttgccgc  
 360  
 ctggattgtg ttgtcaacaa cgctggccac caccacccc cacagaggcc tgaggagacc  
 420  
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 480  
 aagctcgccc tcccctacct gcggaagagt caagggaatg tcatcaacat ctccagcctg  
 540  
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 600  
 gccatgacca aagctttggc cctggatgaa agtccatatg gtgtccgagt caactgtatc  
 660  
 tcccaggaa acatctggac cccgctgtgg gaggagctgg cagccttaat gccagaccct  
 720  
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 780



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 1140  
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 1680  
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 1740  
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 1800  
 ggggggggtgg ggggttgttt tttttttttg ttgaagtgtt tttcccaaaa aaaacaaaaa  
 1860  
 aaaaaagaga ggg  
 1873

&lt;210&gt; 4642

&lt;211&gt; 306

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 4642

Met Gly Cys Asp Gly Gly Thr Ile Pro Lys Arg His Glu Leu Val Lys  
 1 5 10 15  
 Gly Pro Lys Lys Val Glu Lys Val Asp Lys Asp Ala Glu Leu Val Ala  
 20 25 30  
 Gln Trp Asn Tyr Cys Thr Leu Ser Gln Glu Ile Leu Arg Arg Pro Ile  
 35 40 45  
 Val Ala Cys Glu Leu Gly Arg Leu Tyr Asn Lys Asp Ala Val Ile Glu  
 50 55 60  
 Phe Leu Leu Asp Lys Ser Ala Glu Lys Ala Leu Gly Lys Ala Ala Ser  
 65 70 75 80  
 His Ile Lys Ser Ile Lys Asn Val Thr Glu Leu Lys Leu Ser Asp Asn  
 85 90 95  
 Pro Ala Trp Glu Gly Asp Lys Gly Asn Thr Lys Gly Asp Lys His Asp  
 100 105 110  
 Asp Leu Gln Arg Ala Arg Phe Ile Cys Pro Val Val Gly Leu Glu Met  
 115 120 125  
 Asn Gly Arg His Arg Phe Cys Phe Leu Arg Cys Cys Gly Cys Val Phe  
 130 135 140  
 Ser Glu Arg Ala Leu Lys Glu Ile Lys Ala Glu Val Cys His Thr Cys

&lt;400&gt; 4640

Met Asn Thr Ile Gly Phe His Lys Ser Phe Cys Cys Cys Leu Asp Ser  
 1 5 10 15  
 Pro Cys Phe Phe Leu Glu Arg Asn Ile Pro Asn Phe Leu Leu Leu Leu  
 20 25 30  
 Leu Arg Arg Ser Phe Ala Leu Val Ala Gln Ala Arg Val Gln Trp Arg  
 35 40 45  
 Asp Leu Ser Ser Leu Gln Pro Pro Pro Pro Arg Leu Lys Arg Phe Ser  
 50 55 60  
 His Leu Ser Leu Pro Ser Ser  
 65 70

&lt;210&gt; 4641

&lt;211&gt; 1873

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 4641

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 120  
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 180  
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 300  
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 420  
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 480  
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 660  
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 720  
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 780  
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 900  
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 960  
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 1020  
 agaaggttgt ttagtttcca cgtaggcagg tcgctttgtg cctctgagtg cgctgctgtg  
 1080

385					390					395					400
Glu	Asp	Gly	Gly	Ala	Leu	Arg	Gly	Glu	Val	Ile	Pro	Glu	His	Glu	Phe
				405					410					415	
Ala	Thr	Gly	Pro	Val	Cys	Leu	Asp	Asp	Glu	Asn	Glu	Phe	Pro	Pro	Ile
			420					425					430		
Ile	Leu	Cys	Arg	Gly	Asn	Gln	Lys	Gly	Lys	Thr	Lys	Gln	Ser		
		435					440					445			

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<210> 4639
<211> 1007
<212> DNA
<213> Homo sapiens
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<400> 4639
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120
ttaacatttt caatgtcaaa aatacagcac gctgttaaga gttctgtcag tgctcattat
180
cccactagat cccacaaagg gcaaactcaa agatgaaaca aaggcaacgc catcaataac
240
caccatattc cacaggcttt ctcccctagg acgtactaac agggagtttc cacagggaaa
300
aattctcttt taaaaaatta acagtaaaaa taggagttac ttactatcta gatgaacaca
360
attggttttc acaaaagctt ttgctgctgt ctggactcac catgcttttt tcttgagaga
420
aacataccaa actttttgtt gttgttgttg agacggagtt tcgctcttgt tgcccaggct
480
agagtgaat ggcgtgatct cagctcactg caacctccgc ctcccaggct caagcgattc
540
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600
tttnnctgta gagacggtnn ttcaccatgt tgcccagact ggtctcaaatt tcttgggctc
660
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720
ccagctacaa agactctttt cccacataag gtcacattca cagggtccaa gtagacattt
780
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840
tgggtgtggc ttattggatg tttcatTTTT aggtgacctt ggccccttgc tgaagaaggg
900
atagacccat gccctctgca gaagggtga ggtttaggca aggccaattc cttcccctgt
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ctcatggcat taacgttcct atgcccggtg ggtgtcatte tgctagc
1007

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<210> 4640
<211> 71
<212> PRT
<213> Homo sapiens
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&lt;211&gt; 446

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 4638

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Met Glu Ala Glu Ala Ala Asp Ala Pro Pro Gly Gly Val Glu Ser Ala
 1          5          10          15
Leu Ser Cys Phe Ser Phe Asn Gln Asp Cys Thr Ser Leu Ala Ile Gly
      20          25          30
Thr Lys Ala Gly Tyr Lys Leu Phe Ser Leu Ser Ser Val Glu Gln Leu
      35          40          45
Asp Gln Val His Gly Ser Asn Gln Ile Pro Asp Val Tyr Ile Val Glu
 50          55          60
Arg Leu Phe Ser Ser Ser Leu Val Val Val Val Ser His Thr Lys Pro
65          70          75          80
Arg Gln Met Asn Val Tyr His Phe Lys Lys Gly Thr Glu Ile Cys Asn
      85          90          95
Tyr Ser Tyr Ser Ser Asn Ile Leu Ser Ile Arg Leu Asn Arg Gln Arg
      100          105          110
Leu Leu Val Cys Leu Glu Glu Ser Ile Tyr Ile His Asn Ile Lys Asp
      115          120          125
Met Lys Leu Leu Lys Thr Leu Leu Asp Ile Pro Ala Asn Pro Thr Gly
      130          135          140
Leu Cys Ala Leu Ser Ile Asn His Ser Asn Ser Tyr Leu Ala Tyr Pro
145          150          155          160
Gly Ser Leu Thr Ser Gly Glu Ile Val Leu Tyr Asp Gly Asn Ser Leu
      165          170          175
Lys Thr Val Cys Thr Ile Ala Ala His Glu Gly Thr Leu Ala Ala Ile
      180          185          190
Thr Phe Asn Ala Ser Gly Ser Lys Leu Ala Ser Ala Ser Glu Lys Gly
      195          200          205
Thr Val Ile Arg Val Phe Ser Val Pro Asp Gly Gln Lys Leu Tyr Glu
      210          215          220
Phe Arg Arg Gly Met Lys Arg Tyr Val Thr Ile Ser Ser Leu Val Phe
225          230          235          240
Ser Met Asp Ser Gln Phe Leu Cys Ala Ser Ser Asn Thr Glu Thr Val
      245          250          255
His Ile Phe Lys Leu Glu Gln Val Thr Asn Ser Arg Pro Glu Glu Pro
      260          265          270
Ser Thr Trp Ser Gly Tyr Met Gly Lys Met Phe Met Ala Ala Thr Asn
      275          280          285
Tyr Leu Pro Thr Gln Val Ser Asp Met Met His Gln Asp Arg Ala Phe
      290          295          300
Ala Thr Ala Arg Leu Asn Phe Ser Gly Gln Arg Asn Ile Cys Thr Leu
305          310          315          320
Ser Thr Ile Gln Lys Leu Pro Arg Leu Leu Val Ala Ser Ser Ser Gly
      325          330          335
His Leu Tyr Met Tyr Asn Leu Asp Pro Gln Asp Gly Gly Glu Cys Val
      340          345          350
Leu Ile Lys Thr His Ser Leu Leu Gly Ser Gly Thr Thr Glu Glu Asn
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Lys Glu Asn Asp Leu Arg Pro Ser Leu Pro Gln Ser Tyr Ala Ala Thr
      370          375          380
Val Ala Arg Pro Ser Ala Ser Ser Ala Ser Thr Val Pro Gly Tyr Ser

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ga  
2162

&lt;210&gt; 4638

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<210> 4636

<211> 108

<212> PRT

<213> Homo sapiens

<400> 4636

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 20 25 30  
 Lys Glu Val Lys Trp Gly Pro Arg Arg Lys Ala Gly Gly Val Trp Ala  
 35 40 45  
 Glu Pro Ala Ser Gly Gly Leu Pro Pro Pro Glu Asp Glu Phe Cys Ser  
 50 55 60  
 Pro Gly Val Cys Thr Leu Thr Leu Ala His Ser Leu Thr His Lys Thr  
 65 70 75 80  
 Leu Thr Leu Cys Phe Phe Trp Gly Glu Gly His Trp Gln Lys Arg  
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 Leu Pro Trp Pro Gln Ser Val Pro Ile Leu Ile Phe  
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<210> 4637

<211> 2162

<212> DNA

<213> Homo sapiens

<400> 4637

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 180  
 aagctgtttt ctctgagttc tgtggagcag ctggatcaag tccacggaag caatgaaatc  
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 300  
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 420  
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<211> 242  
 <212> PRT  
 <213> Homo sapiens

<400> 4634

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Arg Ile Cys Ile Gln Ala Ile Leu Gln Asp Lys Pro Lys Ile Ala Thr
      20           25           30
Ala Asn Leu Gly Lys Phe Leu Glu Leu Leu Arg Ser His Gln Ser Arg
      35           40           45
Pro Ala Lys Cys Leu Thr Ile Met Trp Ala Leu Gly Gln Ala Gly Phe
      50           55           60
Ala Asn Leu Thr Glu Gly Leu Lys Val Trp Leu Gly Ile Met Leu Pro
      65           70           75           80
Val Leu Gly Ile Lys Ser Leu Ser Pro Phe Ala Ile Thr Tyr Leu Asp
      85           90           95
Arg Leu Leu Leu Met His Pro Asn Leu Thr Lys Gly Phe Gly Met Ile
      100          105          110
Gly Pro Lys Asp Phe Phe Pro Leu Leu Asp Phe Ala Tyr Met Pro Asn
      115          120          125
Asn Ser Leu Thr Pro Ser Leu Gln Glu Gln Leu Cys Gln Leu Tyr Pro
      130          135          140
Arg Leu Lys Val Leu Ala Phe Gly Ala Lys Pro Asp Ser Thr Leu His
      145          150          155          160
Thr Tyr Phe Pro Ser Phe Leu Ser Arg Ala Thr Pro Ser Cys Pro Pro
      165          170          175
Glu Met Lys Lys Glu Leu Leu Ser Ser Leu Thr Glu Cys Leu Thr Val
      180          185          190
Asp Pro Leu Ser Ala Ser Val Trp Arg Gln Leu Tyr Pro Lys His Leu
      195          200          205
Ser Gln Ser Ser Leu Leu Leu Glu His Leu Leu Ser Ser Trp Glu Gln
      210          215          220
Ile Pro Lys Lys Val Gln Lys Ser Leu Gln Glu Thr Ile Gln Ser Leu
      225          230          235          240
Lys Leu

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<210> 4635  
 <211> 384  
 <212> DNA  
 <213> Homo sapiens

<400> 4635

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180
ctcctcccga agatgagttt tgtagcccag gtgtttgcac actcacactt gctcactccc
240
tcacacacaa aaccctcact ctttgctttt tctggggaga gggaggccac tggcagaagc
300

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260 265 270  
 Ser Ser Pro Ala Gln Gln Ala Glu Asn Glu Ala Lys Ala Ser Ser Ser  
 275 280 285  
 Ile Leu Ile Asp Glu Ser Glu Pro Thr Thr Asn Ile Gln Ile Arg Leu  
 290 295 300  
 Ala Asp Gly Gly Arg Leu Val Gln Lys Phe Asn His Ser His Arg Ile  
 305 310 315 320  
 Ser Asp Ile Arg Leu Phe Ile Val Asp Ala Arg Pro Ala Met Ala Ala  
 325 330 335  
 Thr Ser Phe Ile Leu Met Thr Thr Phe Pro Asn Lys Glu Leu Ala Asp  
 340 345 350  
 Glu Ser Gln Thr Leu Lys Glu Ala Asn Leu Leu Asn Ala Val Ile Val  
 355 360 365  
 Gln Arg Leu Thr  
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&lt;210&gt; 4633

&lt;211&gt; 873

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 4633

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 120  
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 180  
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 240  
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 300  
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 360  
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 480  
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 780  
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 873

&lt;210&gt; 4634



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 2460  
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 2580  
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&lt;210&gt; 4632

&lt;211&gt; 372

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 4632

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 Asp Leu Gln Ile Ala Leu Ala Ser Phe Tyr Glu Asp Gly Gly Asp Glu  
 35 40 45  
 Asp Ile Val Thr Ile Ser Gln Ala Thr Pro Ser Ser Val Ser Arg Gly  
 50 55 60  
 Thr Ala Pro Ser Asp Asn Arg Val Thr Ser Phe Arg Asp Leu Ile His  
 65 70 75 80  
 Asp Gln Asp Glu Asp Glu Glu Glu Glu Gly Gln Arg Ser Arg Phe  
 85 90 95  
 Tyr Ala Gly Gly Ser Glu Arg Ser Gly Gln Gln Ile Val Gly Pro Pro  
 100 105 110  
 Arg Lys Lys Ser Pro Asn Glu Leu Val Asp Asp Leu Phe Lys Gly Ala  
 115 120 125  
 Lys Glu His Gly Ala Val Ala Val Glu Arg Val Thr Lys Ser Pro Gly  
 130 135 140  
 Glu Thr Ser Lys Pro Arg Pro Phe Ala Gly Gly Gly Tyr Arg Leu Gly  
 145 150 155 160  
 Ala Ala Pro Glu Glu Glu Ser Ala Tyr Val Ala Gly Glu Lys Arg Gln  
 165 170 175  
 His Ser Ser Gln Asp Val His Val Val Leu Lys Leu Trp Lys Ser Gly  
 180 185 190  
 Phe Ser Leu Asp Asn Gly Glu Leu Arg Ser Tyr Gln Asp Pro Ser Asn  
 195 200 205  
 Ala Gln Phe Leu Glu Ser Ile Arg Arg Gly Glu Val Pro Ala Glu Leu  
 210 215 220  
 Arg Arg Leu Ala His Gly Gly Gln Val Asn Leu Asp Met Glu Asp His  
 225 230 235 240  
 Arg Asp Glu Asp Phe Val Lys Pro Lys Gly Ala Phe Lys Ala Phe Thr  
 245 250 255  
 Gly Glu Gly Gln Lys Leu Gly Ser Thr Ala Pro Gln Val Leu Ser Thr

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<211> 140  
 <212> PRT  
 <213> Homo sapiens

<400> 4630  
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 35 40 45  
 Ser Trp Ala Leu Arg Val Ser Val Phe Pro Gln Ile Gly Lys Met Arg  
 50 55 60  
 Gly Arg Gly Gly Tyr Trp Gly Gln Ala Ser Ala Gln Pro Trp Val Leu  
 65 70 75 80  
 Leu Glu Pro Gly Leu Glu Pro Glu Val Gly Arg Val Ser Lys Leu Ser  
 85 90 95  
 Ser Trp Ile Pro Ile Cys Arg Thr Ala Pro Arg Thr Arg Ser Gly Val  
 100 105 110  
 Arg Ala His Pro Leu Ala Arg Ile Leu Gly Ser Leu Gly His Lys Ala  
 115 120 125  
 Gly Gln Gly Thr Arg Asp Pro Pro Thr Gln Glu Thr  
 130 135 140

<210> 4631  
 <211> 2756  
 <212> DNA  
 <213> Homo sapiens

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<210> 4629

<211> 706

<212> DNA

<213> Homo sapiens

<400> 4629

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706

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<210> 4630

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<210> 4628

<211> 469

<212> PRT

<213> Homo sapiens

<400> 4628

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Pro	Asp	Phe	Gly	Leu	Gly	Glu	Glu	Ala	Glu	Phe	Val	Glu	Val	Glu	
			20				25					30			
Pro	Glu	Ala	Lys	Gln	Glu	Ile	Leu	Glu	Asn	Lys	Asp	Val	Val	Val	Gln
			35				40					45			
His	Val	His	Phe	Asp	Gly	Leu	Gly	Arg	Thr	Lys	Asp	Asp	Ile	Ile	Ile
			50			55					60				
Cys	Glu	Ile	Gly	Asp	Val	Phe	Lys	Ala	Lys	Asn	Leu	Ile	Glu	Val	Met
65					70					75				80	
Arg	Lys	Ser	His	Glu	Ala	Arg	Glu	Lys	Leu	Leu	Arg	Leu	Gly	Ile	Phe
			85						90					95	
Arg	Gln	Val	Asp	Val	Leu	Ile	Asp	Thr	Cys	Gln	Gly	Asp	Gly	Ala	Leu
			100					105					110		
Pro	Asn	Gly	Leu	Asp	Val	Thr	Phe	Glu	Val	Thr	Glu	Leu	Arg	Arg	Leu
			115					120					125		
Thr	Gly	Ser	Tyr	Asn	Thr	Met	Val	Gly	Asn	Asn	Glu	Gly	Ser	Met	Val
			130				135					140			
Leu	Gly	Leu	Lys	Leu	Pro	Asn	Leu	Leu	Gly	Arg	Ala	Glu	Lys	Val	Thr
145					150					155				160	
Phe	Gln	Phe	Ser	Tyr	Gly	Thr	Lys	Glu	Thr	Ser	Tyr	Gly	Leu	Ser	Phe
			165					170						175	
Phe	Lys	Pro	Arg	Pro	Gly	Asn	Phe	Glu	Arg	Asn	Phe	Ser	Val	Asn	Leu
			180					185					190		
Tyr	Lys	Val	Thr	Gly	Gln	Phe	Pro	Trp	Ser	Ser	Leu	Arg	Glu	Thr	Asp
			195				200					205			
Arg	Gly	Met	Ser	Ala	Glu	Tyr	Ser	Phe	Pro	Ile	Trp	Lys	Thr	Ser	His
			210				215					220			
Thr	Val	Lys	Trp	Glu	Gly	Val	Trp	Arg	Glu	Leu	Gly	Cys	Leu	Ser	Arg
225					230					235				240	
Thr	Ala	Ser	Phe	Ala	Val	Arg	Lys	Glu	Ser	Gly	His	Ser	Leu	Lys	Ser
			245					250						255	
Ser	Leu	Ser	His	Ala	Met	Val	Ile	Asp	Ser	Arg	Asn	Ser	Ser	Ile	Leu
			260					265						270	
Pro	Arg	Arg	Gly	Ala	Leu	Leu	Lys	Val	Asn	Gln	Glu	Leu	Ala	Gly	Tyr
			275				280						285		
Thr	Gly	Gly	Asp	Val	Ser	Phe	Ile	Lys	Glu	Asp	Phe	Glu	Leu	Gln	Leu
			290				295					300			
Asn	Lys	Gln	Leu	Ile	Phe	Asp	Ser	Val	Phe	Ser	Ala	Ser	Phe	Trp	Gly

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 4627

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&lt;210&gt; 4624

&lt;211&gt; 189

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 4624

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			20					25					30		
Asp	Pro	Trp	Lys	Glu	Glu	Thr	Asp	Thr	Asp	Leu	Glu	Val	Val	Leu	Glu
			35				40					45			
Lys	Lys	Gly	Asn	Met	Asp	Glu	Ala	His	Ile	Asp	Gln	Val	Arg	Arg	Lys
			50			55				60					
Ala	Leu	Gln	Glu	Glu	Ile	Asp	Arg	Glu	Ser	Gly	Lys	Thr	Glu	Ala	Ser
65					70					75				80	
Glu	Thr	Arg	Lys	Trp	Thr	Gly	Thr	Gln	Phe	Gly	Gln	Trp	Asp	Thr	Ala
			85					90					95		
Gly	Phe	Glu	Asn	Glu	Asp	Gln	Lys	Leu	Lys	Phe	Leu	Arg	Leu	Met	Gly



	355		360		365	
Pro	Pro	Ala	Ser	Pro	Gly	Pro
	370		375		380	
Lys	Met	Ala	Ala	Ala	Asn	Gly
385			390		395	
Ser	Pro	Tyr				

&lt;210&gt; 4623

&lt;211&gt; 2220

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 4623

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<210> 4622  
<211> 403  
<212> PRT  
<213> Homo sapiens

<400> 4622  
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Ile Gly Lys Lys Gly Glu Thr Val Lys Arg Ile Arg Glu Gln Ser Ser  
35 40 45  
Ala Arg Ile Thr Ile Ser Glu Gly Ser Cys Pro Glu Arg Ile Thr Thr  
50 55 60  
Ile Thr Gly Ser Thr Ala Ala Val Phe His Ala Val Ser Met Ile Ala  
65 70 75 80  
Phe Lys Leu Asp Glu Asp Leu Cys Ala Ala Pro Ala Asn Gly Gly Asn  
85 90 95  
Val Ser Arg Pro Pro Val Thr Leu Arg Leu Val Ile Pro Ala Ser Gln  
100 105 110  
Cys Gly Ser Leu Ile Gly Lys Ala Gly Thr Lys Ile Lys Glu Ile Arg  
115 120 125  
Glu Thr Thr Gly Ala Gln Val Gln Val Ala Gly Asp Leu Leu Pro Asn  
130 135 140  
Ser Thr Glu Arg Ala Val Thr Val Ser Gly Val Pro Asp Ala Ile Ile  
145 150 155 160  
Leu Cys Val Arg Gln Ile Cys Ala Val Ile Leu Glu Ser Pro Pro Lys  
165 170 175  
Gly Ala Thr Ile Pro Tyr His Pro Ser Leu Ser Leu Gly Thr Val Leu  
180 185 190  
Leu Ser Ala Asn Gln Gly Phe Ser Val Gln Gly Gln Tyr Gly Ala Val  
195 200 205  
Thr Pro Ala Glu Val Thr Lys Leu Gln Gln Leu Ser Ser His Ala Val  
210 215 220  
Pro Phe Ala Thr Pro Ser Val Val Pro Gly Leu Asp Pro Gly Thr Gln  
225 230 235 240  
Thr Ser Ser Gln Glu Phe Leu Val Pro Asn Asp Leu Ile Gly Cys Val  
245 250 255  
Ile Gly Arg Gln Gly Ser Lys Ile Ser Glu Ile Arg Gln Met Ser Gly  
260 265 270  
Ala His Ile Lys Ile Gly Asn Gln Ala Glu Gly Ala Gly Glu Arg His  
275 280 285  
Val Thr Ile Thr Gly Ser Pro Val Ser Ile Ala Leu Ala Gln Tyr Leu  
290 295 300  
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340 345 350  
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&lt;400&gt; 4620

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          20           25           30
Leu Gln Ala Arg Pro Asn Pro Arg Phe Pro Gly Arg Cys Thr Pro Gly
          35           40           45
Trp Glu Lys Leu Thr Asn Glu Ser Ser Trp Gln Pro Pro Gln Ala Pro
          50           55           60
Pro Asp Trp Ala Ser Trp Leu Cys Cys Gln Asp Tyr Asp Pro Leu Pro
65           70           75           80
Glu Ser Arg Arg Ser Pro Gln Ala Glu Arg Tyr Arg His Leu Cys Pro
          85           90           95
Tyr Leu Asn Gln Glu Val Pro
          100

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&lt;210&gt; 4621

&lt;211&gt; 2588

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 4621

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<212> PRT
<213> Homo sapiens
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&lt;210&gt; 4618

&lt;211&gt; 197

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 4618

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<210> 4616

<211> 188

<212> PRT

<213> Homo sapiens

<400> 4616

Met	Ser	Ser	Leu	Glu	Ile	Ser	Ser	Ser	Cys	Phe	Ser	Leu	Glu	Thr	Lys
1				5					10				15		
Leu	Pro	Leu	Ser	Pro	Pro	Leu	Val	Glu	Asp	Ser	Ala	Phe	Glu	Pro	Ser
			20					25				30			
Arg	Lys	Asp	Met	Asp	Glu	Val	Glu	Glu	Lys	Ser	Lys	Asp	Val	Ile	Asn
		35				40					45				
Phe	Thr	Ala	Glu	Lys	Leu	Ser	Val	Asp	Glu	Val	Ser	Gln	Leu	Val	Ile
	50					55					60				
Ser	Pro	Leu	Cys	Gly	Ala	Ile	Ser	Leu	Phe	Val	Gly	Thr	Thr	Arg	Asn



cggccgcgtg tacacacagg cctataatag tgacacgctg gtgagtgttc tgggcactgt  
 60  
 gcctgcagtg ttcccttgcg gggcagggtc tgtctacac atgcacaagc tctgggtgtt  
 120  
 ctttaaggcg tttgatttct gaagattgac aaggttctgt ttattgtata ttatgtttaa  
 180  
 tgatctcagt tgtaatatg tcaagatttg gggtgtgaag attaggaagt ccttacagtg  
 240  
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 300  
 tgacgttggg gccagacagg tgacaggaga gggagttggg cctcgtgggg atagtggcaa  
 360  
 attgggacgt ggcattgttt cattaaagcg aggtgttctt cctgtcggc tgcgtgtctc  
 420  
 tgtggcatgg ggctagcctg ccctgcccct gcag  
 454

&lt;210&gt; 4614

&lt;211&gt; 117

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 4614

Met	Pro	Arg	Pro	Asn	Leu	Pro	Leu	Ser	Pro	Arg	Gly	Pro	Thr	Pro	Ser
1				5				10						15	
Pro	Val	Thr	Cys	Leu	Ala	Pro	Thr	Ser	Asn	Glu	Phe	Thr	Arg	Gly	Asn
			20					25						30	
Glu	Phe	Thr	Asn	Gly	Asn	Leu	Thr	Met	Ser	Asn	Glu	Phe	His	Cys	Lys
			35				40						45		
Asp	Phe	Leu	Ile	Phe	Thr	Thr	Gln	Ile	Leu	Thr	Ile	Leu	Gln	Leu	Arg
			50				55						60		
Ser	Leu	Asn	Ile	Ile	Tyr	Asn	Lys	Gln	Asn	Leu	Val	Asn	Leu	Gln	Lys
					70					75				80	
Ser	Asn	Ala	Leu	Lys	Lys	His	Gln	Ser	Leu	Cys	Met	Cys	Arg	Thr	Asp
					85					90				95	
Pro	Ala	Pro	Gln	Gly	Asn	Thr	Ala	Gly	Thr	Val	Pro	Arg	Thr	Leu	Thr
			100					105						110	
Ser	Val	Ser	Leu	Leu											
															115

&lt;210&gt; 4615

&lt;211&gt; 1350

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 4615

nntgattcgg tcccgtgtgc ctaggcggga tgggtgccgt gtgccagggt gaagtattgt  
 60  
 attttgcaaa aagtgtgaa ataacaggag ttcgttcaga gaccatttct gtgcctcaag  
 120  
 aaataaaagc gttgcagctg tggaaggaga tagaaactcg acatcctgga ttggctgatg  
 180  
 ttagaaatca gataatattt gctgttcgtc aagaatatgt cgagcttgga gatcagctcc  
 240

165 170 175  
 Lys Arg Lys Thr Ser Ser Asp Asp Glu Ser Glu Glu Asp Glu Asp Asp  
 180 185 190  
 Leu Leu Gln Arg Thr Gly Asn Phe Ile Ser Thr Ser Thr Ser Leu Pro  
 195 200 205  
 Arg Gly Ile Leu Lys Met Lys Asn Cys Gln His Ala Asn Ala Glu Arg  
 210 215 220  
 Pro Thr Val Ala Arg Ile Ser Ser Val Gln Phe His Pro Gly Ala Gln  
 225 230 235 240  
 Ile Val Met Val Ala Gly Leu Asp Asn Ala Val Ser Leu Phe Gln Val  
 245 250 255  
 Asp Gly Lys Thr Asn Pro Lys Ile Gln Ser Ile Tyr Leu Glu Arg Phe  
 260 265 270  
 Pro Ile Phe Lys Ala Cys Phe Ser Ala Asn Gly Glu Glu Val Leu Ala  
 275 280 285  
 Thr Ser Thr His Ser Lys Val Leu Tyr Val Tyr Asp Met Leu Ala Gly  
 290 295 300  
 Lys Leu Ile Pro Val His Gln Val Arg Gly Leu Lys Glu Lys Ile Val  
 305 310 315 320  
 Arg Ser Phe Glu Val Ser Pro Asp Gly Ser Phe Leu Leu Ile Asn Gly  
 325 330 335  
 Ile Ala Gly Tyr Leu His Leu Leu Ala Met Lys Thr Lys Glu Leu Ile  
 340 345 350  
 Gly Ser Met Lys Ile Asn Gly Arg Val Ala Ala Ser Thr Phe Ser Ser  
 355 360 365  
 Asp Ser Lys Lys Val Tyr Ala Ser Ser Gly Asp Gly Glu Val Tyr Val  
 370 375 380  
 Trp Asp Val Asn Ser Arg Lys Cys Leu Asn Arg Phe Val Asp Glu Gly  
 385 390 395 400  
 Ser Leu Tyr Gly Leu Ser Ile Ala Thr Ser Arg Asn Gly Gln Tyr Val  
 405 410 415  
 Ala Cys Gly Ser Asn Cys Gly Val Val Asn Ile Tyr Asn Gln Asp Ser  
 420 425 430  
 Cys Leu Gln Glu Thr Asn Pro Lys Pro Ile Lys Ala Ile Met Asn Leu  
 435 440 445  
 Val Thr Gly Val Thr Ser Leu Thr Phe Asn Pro Thr Thr Glu Ile Leu  
 450 455 460  
 Ala Ile Ala Ser Glu Lys Met Lys Glu Ala Val Arg Leu Val His Leu  
 465 470 475 480  
 Pro Ser Cys Thr Val Phe Ser Asn Phe Pro Val Ile Lys Asn Lys Asn  
 485 490 495  
 Ile Ser His Val His Thr Met Asp Phe Ser Pro Arg Ser Gly Tyr Phe  
 500 505 510  
 Ala Leu Gly Asn Glu Lys Gly Lys Ala Leu Met Tyr Arg Leu His His  
 515 520 525  
 Tyr Ser Asp Phe  
 530

&lt;210&gt; 4613

&lt;211&gt; 454

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 4613

atgaagacca aagaactgat tggaagcatg aaaattaatg gaagggttgc agcatccaca  
 1260  
 ttctcttcag atagtaagaa agtatacgcc tcttcggggg atggagaagt ttatgtttgg  
 1320  
 gatgtgaact caaggaagtg ccttaacaga tttgttgatg aaggcagttt atatggatta  
 1380  
 agcattgccca catctaggaa tggacagtat gttgcttggtg gttctaattg tggagtggta  
 1440  
 aatatataca atcaagattc ttgtctccaa gaaacaaacc caaagccaat aaaagctata  
 1500  
 atgaacttgg ttacaggtgt tacttctctg accttcaatc ctactacaga aatcttggca  
 1560  
 attgcttcag aaaaaatgaa agaagcagtc agattgggtc atcttccttc ctgtacagta  
 1620  
 ttttcaaact tcccgatcat taaaaataag aatatttctc atgttcatac catggatttt  
 1680  
 tctccgagaa gtggatactt tgccttgggg aatgaaaagg gcaaggccct gatgtatagg  
 1740  
 ttgcaccatt actcagactt ctaaagagac tatttgaagt ccagttgagt cacaagagaa  
 1800  
 gcctgtcttg atatatcatc tcagaaactt tcctgaatat gtgataatat atggaaaatg  
 1860  
 atttatagat ccagctgtgc ttaagagcca gtaatgtctt aataaacatg tggcagcttt  
 1920  
 tgtttgaaaa aaaaaaaaaa aaaaaa  
 1946

&lt;210&gt; 4612

&lt;211&gt; 532

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 4612

Met	Arg	Pro	Asp	Trp	Lys	Ala	Gly	Ala	Gly	Pro	Gly	Gly	Pro	Pro	Gln
1				5					10					15	
Lys	Pro	Ala	Pro	Ser	Ser	Gln	Arg	Lys	Pro	Pro	Ala	Arg	Pro	Ser	Ala
		20					25						30		
Ala	Ala	Ala	Ala	Ile	Ala	Val	Ala	Ala	Ala	Glu	Glu	Glu	Arg	Arg	Leu
	35					40					45				
Arg	Gln	Arg	Asn	Arg	Leu	Arg	Leu	Glu	Glu	Asp	Lys	Pro	Ala	Val	Glu
	50				55					60					
Arg	Cys	Leu	Glu	Glu	Leu	Val	Phe	Gly	Asp	Val	Glu	Asn	Asp	Glu	Asp
65					70				75					80	
Ala	Leu	Leu	Arg	Arg	Leu	Arg	Gly	Pro	Arg	Val	Gln	Glu	His	Glu	Asp
			85				90						95		
Ser	Gly	Asp	Ser	Glu	Val	Glu	Asn	Glu	Ala	Lys	Gly	Asn	Phe	Pro	Pro
	100						105					110			
Gln	Lys	Lys	Pro	Val	Trp	Val	Asp	Glu	Glu	Asp	Glu	Asp	Glu	Glu	Met
	115					120				125					
Val	Asp	Met	Met	Asn	Asn	Arg	Phe	Arg	Lys	Asp	Met	Met	Lys	Asn	Ala
	130				135					140					
Ser	Glu	Ser	Lys	Leu	Ser	Lys	Asp	Asn	Leu	Lys	Lys	Arg	Leu	Lys	Glu
145				150					155				160		
Glu	Phe	Gln	His	Ala	Met	Gly	Gly	Val	Pro	Ala	Trp	Ala	Glu	Thr	Thr

195	200	205
Leu Gln Gly Lys Val Gln	Leu Glu Asp Ile Leu	His His Leu Glu Lys
210	215	220
Glu Glu Ile Asn Pro Leu	Ala Thr Thr Glu Glu	Gln Leu Cys Leu Val
225	230	235
240	245	250
Leu Ile Pro Ala Ser Thr	Val Lys Thr Gly	

&lt;210&gt; 4611

&lt;211&gt; 1946

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 4611

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ccccggggcctt cggcggcggc ggcccgcgag gggcctgggc gcatgcgcag cgagggtcca
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120
aaactggacc ggagaaccgg agcgaagccg aagcggaaag ccggaatgag gccggactgg
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240
ccgccggccc ggccgagcgc ggcggccgct gcgattgcag tcgcggcggc ggaggaagag
300
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360
tgcttgagg agctggtctt cggcgacgtc gagaacgacg aggacgcgtt gctgcggcgt
420
ctgcgaggcc cgagggttca agaacatgaa gactcgggtg actcagaagt ggagaatgaa
480
gcaaaaggta atttccacc tcaaaagaag ccagtttggg tggatgaaga agatgaagat
540
gaggaaatgg ttgacatgat gaacaatcgg tttcggaagg atatgatgaa aaatgctagt
600
gaaagtaaac tttcgaaaga caaccttaaa aagagactta aagaagaatt ccaacatgcc
660
atgggaggag tacctgcctg ggcagagact actaagcgga aaacatcttc agatgatgaa
720
agtgaagagg atgaagatga tttgttgcaa aggactggga atttcatatc cacatcaact
780
tctcttccaa gaggcattct gaagatgaag aactgccagc atgcgaatgc tgaacgtcct
840
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900
ggattagata atgctgtatc actatttcag gttgatggga aaacaaatcc taaaattcag
960
agcatctatt tggaaagggt tccaatcttt aaggcttggt ttagtgctaa tggggaagaa
1020
gttttagcca cgagtaccca cagcaagggt ctttatgtct atgacatgct ggctggaaag
1080
ttaattcctg tgcatcaagt gagaggtttg aaagagaaga tagtgaggag ctttgaagtc
1140
tccccagatg ggctcctctt gctcataaat ggcattgctg gatatttgca tttgctagca
1200

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cgcttccac cccagacttg gctgtccgct ctgcggcctt cgggcccagc cctttcgggc  
 360  
 ttgctgagcc tggaggccga ggagaatgca cttccgggtt ttgctgaggc tctgaggagc  
 420  
 taccaggagg ctgcggctgc aggcaccttc ctggcagtag agttcaccac ttggcggac  
 480  
 tatttgcata tgttgaggc tgcggcccag gcactcaatc cgctaggccc ttctgcgatg  
 540  
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 600  
 aagatccagt catctggggg cccactgcag ggaaaagtgc agttagaaga catacttcac  
 660  
 catcttgaat aagaagaaat caatcccctt gctactacag aagaacaact ctgtttggtg  
 720  
 cttattccag ccagcacagt gaagacaggc tgaggactgc taccacagat gtagaagagc  
 780  
 ttatagttaa gcacatgggt gaaacaaaag aagtgagaac taatagcata gaatttttaa  
 840  
 gacacctgtg attttgttca ttgcccttca ttaaattgac atattaaaaa aaaaaaaaaa  
 900  
 aaaa  
 904

&lt;210&gt; 4610

&lt;211&gt; 250

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 4610

Xaa	Ala	Ala	Ala	Leu	Gln	Met	Ala	Glu	Met	Asp	Pro	Val	Ala	Glu	Phe
1				5				10						15	
Pro	Gln	Pro	Pro	Gly	Ala	Ala	Arg	Trp	Ala	Glu	Val	Met	Ala	Arg	Phe
				20				25					30		
Ala	Ala	Arg	Leu	Gly	Ala	Gln	Gly	Arg	Arg	Val	Val	Leu	Val	Thr	Ser
				35				40					45		
Gly	Gly	Thr	Lys	Val	Pro	Leu	Glu	Ala	Arg	Pro	Val	Arg	Phe	Leu	Asp
				50				55				60			
Asn	Phe	Ser	Ser	Gly	Arg	Arg	Gly	Ala	Thr	Ser	Ala	Glu	Ala	Phe	Leu
65				70				75						80	
Ala	Ala	Gly	Tyr	Gly	Val	Leu	Phe	Leu	Tyr	Arg	Ala	Arg	Ser	Ala	Phe
				85				90						95	
Pro	Tyr	Ala	His	Arg	Phe	Pro	Pro	Gln	Thr	Trp	Leu	Ser	Ala	Leu	Arg
				100				105					110		
Pro	Ser	Gly	Pro	Ala	Leu	Ser	Gly	Leu	Leu	Ser	Leu	Glu	Ala	Glu	Glu
				115				120				125			
Asn	Ala	Leu	Pro	Gly	Phe	Ala	Glu	Ala	Leu	Arg	Ser	Tyr	Gln	Glu	Ala
				130				135				140			
Ala	Ala	Ala	Gly	Thr	Phe	Leu	Ala	Val	Glu	Phe	Thr	Thr	Leu	Ala	Asp
145				150				155						160	
Tyr	Leu	His	Leu	Leu	Gln	Ala	Ala	Ala	Gln	Ala	Leu	Asn	Pro	Leu	Gly
				165				170						175	
Pro	Ser	Ala	Met	Phe	Tyr	Leu	Ala	Ala	Ala	Val	Ser	Asp	Phe	Tyr	Val
				180				185					190		
Pro	Val	Ser	Glu	Met	Pro	Glu	His	Lys	Ile	Gln	Ser	Ser	Gly	Gly	Pro

nnagatctct gagggataga ttgccagaga aggggaagtt tcagtccagg catatgtgca  
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 gagccttgat caattgagga aaagaaaggc tgttttacac aagagagaag ctgatgttgt  
 120  
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 180  
 aagtgaatt gtcggcaaga gatgcggacc acccagctgg gccctgggcg cttccaaatg  
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 300  
 ctggaagtag aaatagagcc tggggtgaga gacggcatgg agtaccctt tattggagaa  
 360  
 ggtgagcctc acgtggatgg gnagcctgga gatttacggt tccgaatcaa agttgtcaag  
 420  
 cacccaatat ttgaaaggag aggagatgat ctgtac  
 456

&lt;210&gt; 4608

&lt;211&gt; 107

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 4608

Val	Val	Arg	Asn	Lys	Pro	Val	Ala	Arg	Gln	Ala	Pro	Gly	Lys	Arg	Lys
1				5					10					15	
Cys	Asn	Cys	Arg	Gln	Glu	Met	Arg	Thr	Thr	Gln	Leu	Gly	Pro	Gly	Arg
			20					25					30		
Phe	Gln	Met	Thr	Gln	Glu	Val	Val	Cys	Asp	Glu	Cys	Pro	Asn	Val	Lys
		35					40				45				
Leu	Val	Asn	Glu	Glu	Arg	Thr	Leu	Glu	Val	Glu	Ile	Glu	Pro	Gly	Val
	50				55					60					
Arg	Asp	Gly	Met	Glu	Tyr	Pro	Phe	Ile	Gly	Glu	Gly	Glu	Pro	His	Val
65				70					75					80	
Asp	Gly	Xaa	Pro	Gly	Asp	Leu	Arg	Phe	Arg	Ile	Lys	Val	Val	Lys	His
			85				90						95		
Pro	Ile	Phe	Glu	Arg	Arg	Gly	Asp	Asp	Leu	Tyr					
			100				105								

&lt;210&gt; 4609

&lt;211&gt; 904

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 4609

ncggccgccc cgctgcagat ggcggaagt gatccggtag ccgagttccc ccagcctccc  
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 ggtgctgcgc gctgggctga gggttatggct cgcttcgagg ccaggctggg cgcgaggggc  
 120  
 cggcggttgg tggttggttac gtcaggcggc accaagggtcc cactggaagc gcggccgggtg  
 180  
 cgcttccttg acaacttcag cagcggggcg cgcggtgcaa cctcggccga ggccttccta  
 240  
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 300

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      210              215              220
Glu Gly Ile Pro Thr Pro Arg Val Leu Trp Ala Phe Pro Glu Gly Val
225              230              235              240
Val Leu Pro Ala Pro Tyr Tyr Gly Asn Arg Ile Thr Val His Gly Asn
      245              250              255
Gly Ser Leu Asp Ile Arg Ser Leu Arg Lys Ser Asp Ser Val Gln Leu
      260              265              270
Val Cys Met Ala Arg Asn Glu Gly Gly Glu Ala Arg Leu Ile Leu Gln
      275              280              285
Leu Thr Val Leu Glu Pro Met Glu Lys Pro Ile Phe His Asp Pro Ile
      290              295              300
Ser Glu Lys Ile Thr Ala Met Ala Gly His Thr Ile Ser Leu Asn Cys
305              310              315              320
Ser Ala Ala Gly Thr Pro Thr Pro Ser Leu Val Trp Val Leu Pro Asn
      325              330              335
Gly Thr Asp Leu Gln Ser Gly Gln Gln Leu Gln Arg Phe Tyr His Lys
      340              345              350
Ala Asp Gly Met Leu His Ile Ser Gly Leu Ser Ser Val Asp Ala Gly
      355              360              365
Ala Tyr Arg Cys Val Ala Arg Asn Ala Ala Gly His Thr Glu Arg Leu
      370              375              380
Val Ser Leu Lys Val Gly Leu Lys Pro Glu Ala Asn Lys Gln Tyr His
385              390              395              400
Asn Leu Val Ser Ile Ile Asn Gly Glu Thr Leu Lys Leu Pro Cys Thr
      405              410              415
Pro Pro Gly Ala Gly Gln Gly Arg Phe Ser Trp Thr Leu Pro Asn Gly
      420              425              430
Met His Leu Glu Gly Pro Gln Thr Leu Gly Arg Val Ser Leu Leu Asp
      435              440              445
Asn Gly Thr Leu Thr Val Arg Glu Ala Ser Val Phe Asp Arg Gly Thr
      450              455              460
Tyr Val Cys Arg Met Glu Thr Glu Tyr Gly Pro Ser Val Thr Ser Ile
465              470              475              480
Pro Val Ile Val Ile Ala Tyr Pro Pro Arg Ile Thr Ser Glu Pro Thr
      485              490              495
Pro Val Ile Tyr Thr Arg Pro Gly Asn Thr Val Lys Leu Asn Cys Met
      500              505              510
Ala Met Gly Ile Pro Lys Ala Asp Ile Thr Trp Glu Leu Pro Asp Lys
      515              520              525
Ser His Leu Lys Ala Gly Val Gln Ala Arg Leu Tyr Gly Asn Arg Phe
      530              535              540
Leu His Pro Gln Gly Ser Leu Thr Ile Gln His Ala Thr Gln Arg Asp
545              550              555              560
Ala Gly Phe Tyr Lys Cys Met Ala Lys Asn Ile Leu Gly Ser Asp Ser
      565              570              575
Lys Thr Thr Tyr Ile His Val Phe
      580

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&lt;210&gt; 4607

&lt;211&gt; 456

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 4607

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 2520  
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 2580  
 aatataattt taaaaaattt ctctccaacc tccttcaa atcagtcacca ctgttatatt  
 2640  
 accttctcca ggaaccctcc agtggggaag gctgcgatat tagatttctt tgtatgcaaa  
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 2760  
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 2820  
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 2880  
 cccatgaata atacacgacc tgttatttcc atgactgctt tactgtattt ttaaggtcaa  
 2940  
 tatactgtac atttgataat aaaataatat tctcccaaaa aaaaaaaaaa aaaaaaag  
 2998

&lt;210&gt; 4606

&lt;211&gt; 584

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 4606

Ile	Glu	His	Lys	Glu	Glu	Asn	Asp	His	Lys	Val	Phe	Tyr	Gly	Gly	Asp
1				5					10					15	
Leu	Lys	Val	Asp	Cys	Val	Ala	Thr	Gly	Leu	Pro	Asn	Pro	Glu	Ile	Ser
			20					25					30		
Trp	Ser	Leu	Pro	Asp	Gly	Ser	Leu	Val	Asn	Ser	Phe	Met	Gln	Ser	Asp
		35					40					45			
Asp	Ser	Gly	Gly	Arg	Thr	Lys	Arg	Tyr	Val	Val	Phe	Asn	Asn	Gly	Thr
	50					55					60				
Leu	Tyr	Phe	Asn	Glu	Val	Gly	Met	Arg	Glu	Glu	Gly	Asp	Tyr	Thr	Cys
65				70					75					80	
Phe	Ala	Glu	Asn	Gln	Val	Gly	Lys	Asp	Glu	Met	Arg	Val	Arg	Val	Lys
			85						90					95	
Val	Val	Thr	Ala	Pro	Ala	Thr	Ile	Arg	Asn	Lys	Thr	Cys	Leu	Ala	Val
			100					105					110		
Gln	Val	Pro	Tyr	Gly	Asp	Val	Val	Thr	Val	Ala	Cys	Glu	Ala	Lys	Gly
		115				120						125			
Glu	Pro	Met	Pro	Lys	Val	Thr	Trp	Leu	Ser	Pro	Thr	Asn	Lys	Val	Ile
	130					135					140				
Pro	Thr	Ser	Ser	Glu	Lys	Tyr	Gln	Ile	Tyr	Gln	Asp	Gly	Thr	Leu	Leu
145				150					155					160	
Ile	Gln	Lys	Ala	Gln	Arg	Ser	Asp	Ser	Gly	Asn	Tyr	Thr	Cys	Leu	Val
			165					170						175	
Arg	Asn	Ser	Ala	Gly	Glu	Asp	Arg	Lys	Thr	Val	Trp	Ile	His	Val	Asn
		180					185						190		
Val	Gln	Pro	Pro	Lys	Ile	Asn	Gly	Asn	Pro	Asn	Pro	Ile	Thr	Thr	Val
		195				200						205			
Arg	Glu	Ile	Ala	Ala	Gly	Gly	Ser	Arg	Lys	Leu	Ile	Asp	Cys	Lys	Ala



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aacggttccc tggacatcag gagtttgagg aagagcgact ccgccagct ggtatgcatg  
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960  
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1140  
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&lt;210&gt; 4605

&lt;211&gt; 2998

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 4605

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Ala	Ser	Ser	Arg	Ala	Arg	Ile	Ser	Arg	Ser	Ile	Ser	Leu	Gly	Asp	Ser
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&lt;210&gt; 4604

&lt;211&gt; 666

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 4604

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&lt;210&gt; 4602

&lt;211&gt; 305

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 4602

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Ala	Val	Arg	Ser	Tyr	Tyr	Glu	Val	Phe	Leu	Lys	Ser	Asp	Arg	Val	Ala
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Arg	Met	Val	Gln	Ser	Gly	Gly	Cys	Ser	Ala	Asn	Asp	Phe	Arg	Glu	Val
	50				55					60					
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Ala	Ile	Tyr	Arg	Gly	Glu	Glu	Asp	Leu	Cys	Lys	Gln	Pro	Asn	Arg	Met
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Glu	Met	Phe	Gln	Gln	Ile	Leu	Gly	Ile	Lys	Lys	Leu	Glu	His	Gln	Leu
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Lys	Glu	Arg	Lys	Phe	Pro	Lys	Phe	Ile	Ala	Lys	Asp	Met	Glu	Asn	Met
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<210> 4600  
 <211> 228  
 <212> PRT  
 <213> Homo sapiens

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 35 40 45  
 Phe Arg Met Glu Ser Gly Ile Glu Pro Ser Val Asp Leu Glu Thr Leu  
 50 55 60  
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 65 70 75 80  
 Glu Ala Ile Ala Leu Ile Asn Ser Leu His Pro Glu Leu Leu Asp Thr  
 85 90 95  
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 100 105 110  
 Ile Arg Gln Arg Glu Thr Glu Ala Ala Leu Glu Phe Ala Gln Thr Gln  
 115 120 125  
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 130 135 140  
 Arg Thr Leu Ala Leu Leu Ala Phe Asp Ser Pro Glu Glu Ser Pro Phe  
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 165 170 175  
 Asn Gln Ala Val Leu Asp Tyr Glu Asn Arg Glu Ser Thr Pro Lys Leu  
 180 185 190  
 Ala Lys Leu Leu Lys Leu Leu Leu Trp Ala Gln Asn Glu Leu Asp Gln  
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<210> 4601  
 <211> 916  
 <212> DNA  
 <213> Homo sapiens

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&lt;211&gt; 135

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 4598

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      35           40           45
Leu Leu Ser Ala Pro Phe Cys Leu Leu Pro Ala Leu Ser Gln Ala Val
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Ser Pro Arg Asn Ser Leu Arg Asn Ile Leu Thr Leu Asn Ser Thr Ala
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Val Tyr Ser Ser Ala Ser Phe Ser Glu His Leu Asp Gly Gly Cys Ser
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Val Asp Gln Ser Leu Arg Glu
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&lt;210&gt; 4599

&lt;211&gt; 2314

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 4599

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&lt;211&gt; 169

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 4596

```

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Phe Leu Gly Thr Ser Ile Ser Ser Ser Ser Trp Ala Pro Leu Arg
      35          40          45
Gly Arg Glu Ala Ala Leu Pro Gly Pro Ala Gly Asp Xaa Ala Val Lys
      50          55          60
Gly Pro Ala Asp Pro Ala Ala Gln His Ser Arg Asp Gly Gln Gly Gly
      65          70          75          80
Trp Pro Pro Ala Gln Gly Thr Ala Ser Thr Ala Gly Lys Ser Gly Ala
      85          90          95
Pro Gly Ala Trp Ser Val Gly Gly Ala Thr Gly Pro Arg Gly Ala Lys
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Gly Pro Arg Thr Gly Arg Pro Ala Pro Ser Pro Gly Ser Pro Pro Arg
      115         120         125
Glu Ser Arg Cys Leu Ala Pro Gly Pro Ser Arg Leu Asp Pro Gly Pro
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Gln Ala Arg Pro Arg Arg Gly Ser Asn
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&lt;210&gt; 4597

&lt;211&gt; 515

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 4597

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&lt;210&gt; 4598

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 1075 1080 1085  
 Val Ser Pro Glu His Val Lys His Cys Phe Arg Leu Thr Gln Glu Phe  
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 Arg His Leu Ser Asn Thr His Thr Asn His Glu Asp Lys Leu Gln Val  
 1105 1110 1115 1120  
 Lys Asn Ile Ile Tyr His Ala Val Lys Asp Ala Val Gly Thr Leu Lys  
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 Ala His Glu Ser Lys Leu Ala Arg Ser  
 1140 1145

&lt;210&gt; 4595

&lt;211&gt; 935

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 4595

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 935

&lt;210&gt; 4596

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	645	650
Leu Phe Asn Ser Leu Leu Leu Gly Pro Thr Ala Ser Asn Asn Lys Thr		655
	660	665
Glu Gly Ser Ser Leu Arg Asp Leu Leu His Ser Gly Pro Gly Lys Leu		670
	675	680
Pro Gln Thr Pro Leu Asp Thr Gly Ile Pro Phe Pro Pro Val Phe Ser		685
	690	695
Thr Ser Ser Ala Gly Val Lys Ser Lys Ala Ser Leu Pro Asn Phe Leu		700
705	710	715
Asp His Ile Ile Ala Ser Val Val Glu Asn Lys Lys Thr Ser Asp Ala		720
	725	730
Ser Lys Arg Ala Cys Asn Leu Thr Asp Thr Gln Lys Glu Val Lys Glu		735
	740	745
Met Val Met Gly Leu Asn Val Leu Asp Pro His Thr Ser His Ser Trp		750
	755	760
Leu Cys Asp Gly Arg Leu Leu Cys Leu His Asp Pro Ser Asn Lys Asn		765
	770	775
Asn Trp Lys Ile Phe Arg Glu Cys Trp Lys Gln Gly Gln Pro Val Leu		780
785	790	795
Val Ser Gly Val His Lys Lys Leu Lys Ser Glu Leu Trp Lys Pro Glu		800
	805	810
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Glu Tyr Thr Lys Arg Asp Gly Arg Leu Asn Leu Ala Ser Arg Leu Pro		895
	900	905
Ser Tyr Phe Val Arg Pro Asp Leu Gly Pro Lys Met Tyr Asn Ala Tyr		910
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Gly Leu Ile Thr Ala Glu Asp Arg Arg Val Gly Thr Thr Asn Leu His		925
	930	935
Leu Asp Val Ser Asp Ala Val Asn Val Met Val Tyr Val Gly Ile Pro		940
945	950	955
Ile Gly Glu Gly Ala His Asp Glu Glu Val Leu Lys Thr Ile Asp Glu		960
	965	970
Gly Asp Ala Asp Glu Val Thr Lys Gln Arg Ile His Asp Gly Lys Glu		975
	980	985
Lys Pro Gly Ala Leu Trp His Ile Tyr Ala Ala Lys Asp Ala Glu Lys		990
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1010	1015	1020
Pro Pro Asp His Asp Pro Ile His Asp Gln Ser Trp Tyr Leu Asp Gln		1025
	1030	1035
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3794

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<210> 4594

<211> 1145

<212> PRT

<213> Homo sapiens

<400> 4594

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		20						25					30		
Phe	Ser	Ser	Phe	Ala	Ser	Gln	Ala	Ser	Gly	Ser	Ser	Ser	Ser	Ala	Thr
		35					40						45		
Thr	Val	Thr	Ser	Lys	Val	Ala	Pro	Ser	Trp	Pro	Glu	Ser	His	Ser	Ser
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Ala	Asp	Ser	Ala	Ser	Leu	Ala	Lys	Lys	Lys	Pro	Leu	Phe	Ile	Thr	Thr
65					70					75				80	
Asp	Ser	Ser	Lys	Leu	Val	Ser	Gly	Val	Leu	Gly	Ser	Ala	Leu	Thr	Ser
			85					90					95		
Gly	Gly	Pro	Ser	Leu	Ser	Ala	Met	Gly	Asn	Gly	Arg	Ser	Ser	Ser	Pro
		100						105					110		
Thr	Ser	Ser	Leu	Thr	Gln	Pro	Ile	Glu	Met	Pro	Thr	Leu	Ser	Ser	Ser
		115				120						125			
Pro	Thr	Glu	Glu	Arg	Pro	Thr	Val	Gly	Pro	Gly	Gln	Gln	Asp	Asn	Pro
		130				135					140				
Leu	Leu	Lys	Thr	Phe	Ser	Asn	Val	Phe	Gly	Arg	His	Ser	Gly	Gly	Phe
145					150					155				160	
Leu	Ser	Ser	Pro	Ala	Asp	Phe	Ser	Gln	Glu	Asn	Lys	Ala	Pro	Phe	Glu
			165					170					175		
Ala	Val	Lys	Arg	Phe	Ser	Leu	Asp	Glu	Arg	Ser	Leu	Ala	Cys	Arg	Gln

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Ala Pro Leu Trp Pro Ser Gly His Asp Arg Leu His Glu Thr Arg Lys
      50           55           60
Leu Arg Cys Leu Ala Asp Arg Leu Val Ser Pro His Pro Ala Ser Ser
      65           70           75           80
Pro Gly Ser Arg Tyr Leu Pro Gln Asn Ser Leu His Lys Trp Pro Gln
      85           90           95
Ala Cys Ala Gly Leu Trp Gly Phe Leu Pro Trp Ala Val Val Leu Gly
      100          105          110
Met Cys Ser Pro Gln Ala Asp Gly Gln Leu Trp Glu Gly Trp Ser Cys
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Trp Ser Gln Gly Trp Ala Gly Lys
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&lt;210&gt; 4593

&lt;211&gt; 4783

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 4593

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 <212> PRT  
 <213> Homo sapiens

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 35 40 45  
 His Thr Leu Ser Pro Leu Ser Phe Arg Cys Ser Gln Arg Glu Pro Gln  
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 Gly Phe Arg Pro Gly Met Arg Cys Gly Gly Ser Ser Leu Gly Arg Thr  
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 Cys Cys Ser Pro Thr Arg Arg Ala Cys Val Val Ser Arg Ala Val Thr  
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<210> 4591  
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 <212> DNA  
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 Pro Pro Cys His Ile Val Asp Tyr Arg Thr Arg Trp Ser Gly Ile Arg  
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 210 215 220  
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 245 250 255  
 Asp Thr Ser His Ile Pro Pro Leu Asn Arg Lys Ala Asp Cys Pro Glu  
 260 265 270  
 Asn Ala Thr Met Ser Leu Lys His Leu Thr Lys Lys Leu Leu Asn Arg  
 275 280 285  
 Asp Ile Gln Val Gly Lys Ser Gly His Ser Ser Val Glu Asp Ala Gln  
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 Ala Thr Met Glu Leu Tyr Lys Leu Val Glu Val Glu Trp Glu Glu His  
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 Leu Ala Arg Asn Pro Pro Thr Asp  
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&lt;210&gt; 4589

&lt;211&gt; 585

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 4589

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&lt;210&gt; 4590

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&lt;210&gt; 4588

&lt;211&gt; 328

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 4588

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			20						25				30		
Pro	Ser	Lys	Lys	Gly	Glu	Thr	Pro	Thr	Val	Asp	Gly	Thr	Trp	Lys	Thr
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Gln	Pro	Leu	Asp	Lys	Lys	Ala	Ala	Val	Ser	Trp	Leu	Thr	Pro	Ala	Pro
65				70					75				80		
Ser	Lys	Lys	Ala	Asp	Ser	Val	Ala	Ala	Lys	Val	Asp	Leu	Leu	Gly	Glu
			85					90					95		
Phe	Gln	Ser	Ala	Leu	Pro	Lys	Ile	Asn	Ser	His	Pro	Thr	Arg	Ser	Gln
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Lys	Lys	Ser	Ser	Gln	Lys	Lys	Ser	Ser	Lys	Lys	Asn	His	Pro	Gln	Lys
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Asn	Ala	Pro	Gln	Asn	Ser	Thr	Gln	Ala	His	Ser	Glu	Asn	Lys	Cys	Ser

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 Leu Ile Asp Asn Arg Lys Val Pro Leu Asn Pro Pro Gly Lys Met Lys  
                                  405                      410                      415  
 Pro Ser Lys Glu Lys Ser Pro Gln Ala Ser Lys Glu Met Ser Ala Leu  
                                  420                      425                      430  
 Gln Glu Arg Asn Leu Glu Glu Lys Ile Lys Gln His Val Leu Gln Met  
                                  435                      440                      445  
 Arg Glu Gln Arg Arg Phe His Gly Gln Ala Pro Leu Glu Glu Met Arg  
                                  450                      455                      460  
 Lys Ala Ala Glu Asp Leu Glu Ile Ala Thr Glu Leu Gln Asp Glu Val  
 465                      470                      475                      480  
 Leu Lys Leu Lys Leu Gly Leu Thr Leu Asn Lys Asp Arg Arg Arg Ala  
                                  485                      490                      495  
 Ala Leu Thr Gly Asn Leu Ser Leu Gly Leu Pro Ala Ala Gln Pro Gln  
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<211> 1723

<212> DNA

<213> Homo sapiens

<400> 4587

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 300  
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 360  
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 420  
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 540  
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&lt;211&gt; 530

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 4586

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      20           25           30
Lys Asp Val His Lys Gly Val Gly Gly Ile Ile Phe Ser Ser Ser Pro
      35           40           45
Ile Leu Asp Leu Ser Glu Ser Gly Leu Cys Arg Leu Glu Glu Val Phe
      50           55           60
Arg Ile Pro Ser Leu Gln Gln Leu His Leu Gln Arg Asn Ala Leu Cys
65           70           75           80
Val Ile Pro Gln Asp Phe Phe Gln Leu Leu Pro Asn Leu Thr Trp Leu
      85           90           95
Asp Leu Arg Tyr Asn Arg Ile Lys Ala Leu Pro Ser Gly Ile Gly Ala
      100          105          110
His Gln His Leu Lys Thr Leu Leu Leu Glu Arg Asn Pro Ile Lys Met
      115          120          125
Leu Pro Val Glu Leu Gly Ser Val Thr Thr Leu Lys Ala Leu Asn Leu
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Arg His Cys Pro Leu Glu Phe Pro Pro Gln Leu Val Val Gln Lys Gly
145          150          155          160
Leu Val Ala Ile Gln Arg Phe Leu Arg Met Trp Ala Val Glu His Ser
      165          170          175
Leu Pro Arg Asn Pro Thr Ser Gln Glu Ala Pro Pro Val Arg Glu Met
      180          185          190
Thr Leu Arg Asp Leu Pro Ser Pro Gly Leu Glu Leu Ser Gly Asp His
      195          200          205
Ala Ser Asn Gln Gly Ala Val Asn Ala Gln Asp Pro Glu Gly Ala Val
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Met Lys Glu Lys Ala Ser Phe Leu Pro Pro Val Glu Lys Pro Asp Leu
225          230          235          240
Ser Glu Leu Arg Lys Ser Ala Asp Ser Ser Glu Asn Trp Pro Ser Glu
      245          250          255
Glu Glu Ile Arg Arg Phe Trp Lys Leu Arg Gln Glu Ile Val Glu His
      260          265          270
Val Lys Ala Asp Val Leu Gly Asp Gln Leu Leu Thr Arg Glu Leu Pro
      275          280          285
Pro Asn Leu Lys Ala Ala Leu Asn Ile Glu Lys Glu Leu Pro Lys Pro
      290          295          300
Arg His Val Phe Arg Arg Lys Thr Ala Ser Ser Arg Ser Ile Leu Pro
305          310          315          320
Asp Leu Leu Ser Pro Tyr Gln Met Ala Ile Arg Ala Lys Arg Leu Glu
      325          330          335
Glu Ser Arg Ala Ala Ala Leu Arg Glu Leu Gln Glu Lys Gln Ala Leu
      340          345          350
Met Glu Gln Gln Arg Arg Glu Lys Arg Ala Leu Gln Glu Trp Arg Glu
      355          360          365
Arg Ala Gln Arg Met Arg Lys Arg Lys Glu Glu Leu Ser Lys Leu Leu
      370          375          380
Pro Pro Arg Arg Ser Met Val Ala Ser Lys Ile Pro Ser Ala Thr Asp

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1952

&lt;210&gt; 4586

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Val Gly Lys Gly Ser Ala Ala	Leu Leu Gln Pro Leu Val Thr Gln Met	
675	680	685
Val Asn Val Tyr His Val His	Gln His Ser Cys Phe Leu Tyr Leu Gly	
690	695	700
Ser Ile Leu Val Asp Glu Tyr	Gly Met Glu Glu Gly Cys Arg Gln Gly	
705	710	715
Leu Leu Asp Met Leu Gln Ala	Leu Cys Ile Pro Thr Phe Gln Leu Leu	
725	730	735
Glu Gln Gln Asn Gly Leu Gln	Asn His Pro Asp Thr Val Asp Asp Leu	
740	745	750
Phe Arg Leu Ala Thr Arg Phe	Ile Gln Arg Ser Pro Val Thr Leu Leu	
755	760	765
Arg Ser Gln Val Val Ile Pro	Ile Leu Gln Trp Ala Ile Ala Ser Thr	
770	775	780
Thr Leu Asp His Arg Asp Ala	Asn Cys Ser Val Met Arg Phe Leu Arg	
785	790	795
Asp Leu Ile His Thr Gly Val	Ala Asn Asp His Glu Glu Asp Phe Glu	
805	810	815
Leu Arg Lys Glu Leu Ile Gly	Gln Val Met Asn Gln Leu Gly Gln Gln	
820	825	830
Leu Val Ser Gln Leu Leu His	Thr Cys Cys Phe Cys Leu Pro Pro Tyr	
835	840	845
Thr Leu Pro Asp Val Ala Glu	Val Leu Trp Glu Ile Met Gln Val Asp	
850	855	860
Arg Pro Thr Phe Cys Arg Trp	Leu Glu Asn Ser Leu Lys Gly Leu Pro	
865	870	875
Lys Glu Thr Thr Val Gly Ala	Val Thr Val Thr His Lys Gln Leu Thr	
885	890	895
Asp Phe His Lys Gln Val Thr	Ser Ala Glu Glu Cys Lys Gln Val Cys	
900	905	910
Trp Ala Leu Arg Asp Phe Thr	Arg Leu Phe Arg	
915	920	

&lt;210&gt; 4585

&lt;211&gt; 1952

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 4585

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3782

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<210> 4584

<211> 923

<212> PRT

<213> Homo sapiens

<400> 4584

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			20				25						30		
Trp	Leu	Gly	Glu	Leu	Gln	Arg	Ser	Val	His	Ala	Trp	Glu	Ile	Ser	Asp
		35				40					45				
Gln	Leu	Leu	Gln	Ile	Arg	Gln	Asp	Val	Glu	Ser	Cys	Tyr	Phe	Ala	Ala
	50				55						60				
Gln	Thr	Met	Lys	Met	Lys	Ile	Gln	Thr	Ser	Phe	Tyr	Glu	Leu	Pro	Thr
65					70				75					80	
Asp	Ser	His	Ala	Ser	Leu	Arg	Asp	Ser	Leu	Leu	Thr	His	Ile	Gln	Asn
			85					90						95	
Leu	Lys	Asp	Leu	Ser	Pro	Val	Ile	Val	Thr	Gln	Leu	Ala	Leu	Ala	Ile
			100					105					110		
Ala	Asp	Leu	Ala	Leu	Gln	Met	Pro	Ser	Trp	Lys	Gly	Cys	Val	Gln	Thr
		115				120					125				
Leu	Val	Glu	Lys	Tyr	Ser	Asn	Asp	Val	Thr	Ser	Leu	Pro	Phe	Leu	Leu
	130					135					140				
Glu	Ile	Leu	Thr	Val	Leu	Pro	Glu	Glu	Val	His	Ser	Arg	Ser	Leu	Arg
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			165					170						175	
Ser	Ser	Thr	Val	Val	Ser	Leu	Leu	Met	Thr	Cys	Val	Glu	Lys	Ala	Gly
			180					185					190		
Thr	Asp	Glu	Lys	Met	Leu	Met	Lys	Val	Phe	Arg	Cys	Leu	Gly	Ser	Trp
		195				200						205			
Phe	Asn	Leu	Gly	Val	Leu	Asp	Ser	Asn	Phe	Met	Ala	Asn	Asn	Lys	Leu
	210					215						220			
Leu	Ala	Leu	Leu	Phe	Glu	Val	Leu	Gln	Gln	Asp	Lys	Thr	Ser	Ser	Asn

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<211> 3350
<212> DNA
<213> Homo sapiens
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3779

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<210> 4582

<211> 354

<212> PRT

<213> Homo sapiens

<400> 4582

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			20					25					30		
Glu	Leu	Met	Lys	Ala	Phe	Glu	Thr	Pro	Glu	Glu	Lys	Arg	Ala	Arg	Arg
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Leu	Ala	Lys	Lys	Glu	Ala	Lys	Glu	Arg	Lys	Lys	Arg	Glu	Lys	Met	Gly
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Trp	Gly	Glu	Glu	Tyr	Met	Gly	Tyr	Thr	Asn	Thr	Asp	Asn	Pro	Phe	Gly
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Asp	Asn	Asn	Leu	Leu	Gly	Thr	Phe	Ile	Trp	Asn	Lys	Ala	Leu	Glu	Lys
			85						90					95	
Lys	Gly	Ile	Ser	His	Leu	Glu	Glu	Lys	Glu	Leu	Lys	Glu	Arg	Asn	Lys
			100					105					110		
Arg	Ile	Gln	Glu	Asp	Asn	Arg	Leu	Glu	Leu	Gln	Lys	Val	Lys	Gln	Leu
	115						120					125			
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Arg	Ile	Arg	Asp	Gly	Arg	Ala	Lys	Pro	Ile	Asp	Leu	Leu	Ala	Lys	Tyr
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Ile	Ser	Ala	Glu	Asp	Asp	Asp	Leu	Ala	Gly	Glu	Met	His	Glu	Pro	Tyr
	195						200					205			
Thr	Phe	Leu	Asn	Gly	Leu	Thr	Val	Ala	Asp	Met	Glu	Asp	Leu	Leu	Glu
	210					215					220				
Asp	Ile	Gln	Val	Tyr	Met	Glu	Leu	Glu	Gln	Gly	Lys	Asn	Ala	Asp	Phe
225					230					235				240	
Trp	Arg	Asp	Met	Thr	Thr	Ile	Thr	Glu	Asp	Glu	Ile	Ser	Lys	Leu	Arg
			245						250					255	
Lys	Leu	Glu	Ala	Ser	Gly	Lys	Gly	Pro	Gly	Glu	Arg	Arg	Glu	Gly	Val
			260					265					270		
Asn	Ala	Ser	Val	Ser	Ser	Asp	Val	Gln	Ser	Val	Phe	Lys	Gly	Lys	Thr
	275						280					285			
Tyr	Asn	Gln	Leu	Gln	Val	Ile	Phe	Gln	Gly	Ile	Glu	Gly	Lys	Ile	Arg
	290					295					300				
Ala	Gly	Gly	Pro	Asn	Leu	Asp	Met	Gly	Tyr	Trp	Glu	Ser	Leu	Leu	Gln

50		55		60											
Arg	Ser	Gly	Pro	Pro	Arg	Gln	Asp	Thr	Tyr	Val	Ser	Thr	Pro	Ser	Glu
65				70						75				80	
Ile	His	Ser	Leu	Ser	Pro	Gly	Glu	Gln	Thr	Glu	Asp	Asp	Leu	Glu	Glu
			85					90					95		
Glu	Cys	Glu	Pro	Glu	Glu	Met	Leu	Lys	Thr	Pro					
			100					105							

&lt;210&gt; 4581

&lt;211&gt; 1396

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 4581

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1200

```

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      835      840      845
Pro Ser Leu Pro Ala Pro Glu Ser Pro Gly Leu Pro Ala His Pro Ser
      850      855      860
Asn Pro Gln Leu Pro Glu Ala Arg Pro Gly Ile Pro Gly Gly Thr Ala
      865      870      875      880
Ser Leu Leu Glu Pro Thr Ser Gly Trp Gly Thr Ser Cys Thr Gly Cys
      885      890      895
Arg Pro Pro Ser Lys Lys Pro Ser Thr Phe Thr Val Cys Trp Ser Pro
      900      905      910
Val Ala Arg Trp Thr Pro Gly Ser Ser Arg His Gly Leu Ser Trp Ser
      915      920      925
Pro Pro Ser Cys Gly Ser Thr Ala Ser Trp Arg Leu Asn Ala Trp Trp
      930      935      940
Gly Leu Val Trp Pro Gln Pro Arg Leu Cys Pro Ala Gln Asp Pro Arg
      945      950      955      960
Pro His Arg Arg Cys Thr Pro Trp Pro Ala Gln Thr Cys Arg Pro Cys
      965      970      975
Trp Asn Thr Thr Arg Ser Cys Trp Cys Arg Pro Cys Gly Gly Arg His
      980      985      990
Gly Gly Thr Glu Gly Ala Ala Pro Pro Pro Gln Pro Cys Cys Phe
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&lt;210&gt; 4579

&lt;211&gt; 321

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 4579

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180
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321

```

&lt;210&gt; 4580

&lt;211&gt; 107

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 4580

```

Xaa Lys Met Phe Gly His Ser Glu Ile Ile Thr Ser Met Lys Phe Thr
1      5      10      15
Tyr Asp Cys His His Leu Ile Thr Val Ser Gly Asp Ser Cys Val Phe
20      25      30
Ile Trp His Leu Gly Pro Glu Ile Thr Asn Cys Met Lys Gln His Leu
35      40      45
Leu Glu Ile Asp His Arg Gln Gln Gln Gln His Thr Asn Asp Lys Lys

```

3775



&lt;213&gt; Homo sapiens

&lt;400&gt; 4578

```

Met Ser His Phe Pro Asp Arg Gly Ser Glu Asn Gly Thr Pro Met Asp
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Val Lys Ala Gly Val Arg Val Met Gln Val Ser Pro Asp Gly Gln His
 20          25          30
Leu Ala Ser Gly Asp Arg Ser Gly Asn Leu Arg Gln Val Gly Pro Gly
 35          40          45
Ser Val Gln Cys Thr Pro Pro Ser Ser Ser Gly Ser Gln Gly Ser
 50          55          60
Gly Gln Lys Pro Trp Pro Trp His Leu Leu Leu Pro Ile Gly Asn Glu
 65          70          75          80
Gly Leu Ile His Glu Leu His Phe Met Asp Glu Leu Val Lys Val Glu
 85          90          95
Ala His Asp Ala Glu Val Leu Cys Leu Glu Tyr Ser Lys Pro Glu Thr
 100          105          110
Gly Leu Thr Leu Leu Ala Ser Ala Ser Arg Asp Arg Leu Ile His Val
 115          120          125
Leu Asn Val Glu Lys Asn Tyr Asn Leu Glu Gln Thr Leu Asp Asp His
 130          135          140
Ser Ser Ser Ile Thr Ala Ile Lys Phe Ala Gly Asn Arg Asp Ile Gln
 145          150          155          160
Met Ile Ser Cys Gly Ala Asp Lys Ser Ile Tyr Phe Arg Ser Ala Gln
 165          170          175
Gln Gly Ser Asp Gly Leu His Phe Val Arg Thr His His Val Ala Glu
 180          185          190
Lys Thr Thr Leu Tyr Asp Met Asp Ile Asp Ile Thr Gln Lys Tyr Val
 195          200          205
Ala Val Ala Cys Gln Asp Arg Asn Val Arg Val Tyr Asn Thr Val Asn
 210          215          220
Gly Lys Gln Lys Lys Cys Tyr Lys Gly Ser Gln Gly Asp Glu Gly Ser
 225          230          235          240
Leu Leu Lys Val His Val Asp Pro Ser Gly Thr Phe Leu Ala Thr Ser
 245          250          255
Cys Ser Asp Lys Ser Ile Ser Val Ile Asp Phe Tyr Ser Gly Glu Cys
 260          265          270
Ile Ala Lys Met Phe Gly His Ser Gly Gly Cys Ala Ser Leu Leu Gly
 275          280          285
Met Pro Pro His Pro Pro Thr Pro Ser Asp Ser Glu Gly Lys Cys Ser
 290          295          300
Leu Ser Ala Leu Phe Ala Glu Ile Ile Thr Ser Met Lys Phe Thr Tyr
 305          310          315          320
Asp Cys His His Leu Ile Thr Val Ser Gly Asp Ser Cys Val Phe Ile
 325          330          335
Trp His Leu Gly Pro Glu Ile Thr Asn Cys Met Lys Gln His Leu Leu
 340          345          350
Glu Ile Asp His Arg Gln Gln Gln Gln His Thr Asn Asp Lys Lys Arg
 355          360          365
Ser Gly His Pro Arg Ser Trp Gln Pro Leu Pro Val His Gln Arg Asp
 370          375          380
Glu Ser Leu Pro Gly Pro His Gly Val Met Leu Gly Thr Gln Ser Ser
 385          390          395          400
Leu Pro Ala Asn Gln Arg Gln Ala Ala Thr Val Gly Lys Ala Ala Gly

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&lt;210&gt; 4578

&lt;211&gt; 1007

&lt;212&gt; PRT

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<210> 4576

<211> 107

<212> PRT

<213> Homo sapiens

<400> 4576

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Gln	Ala	Ala	Leu	His	Leu	Leu	Gln	Pro	Leu	Gly	His	Val	Ala	Arg	Glu
			20					25					30		
Pro	Ala	Arg	His	Val	Ala	Thr	Ala	Gln	Gly	Glu	Val	Leu	Pro	Pro	Gly
		35					40					45			
Gly	Leu	Gly	Gly	Ala	Ala	Gln	Arg	Ala	Arg	Gly	Gln	Ser	His	Gly	Gly
	50					55					60				
Thr	Val	Pro	Gly	Asn	Ala	Pro	Ala	Ala	Asp	Leu	Leu	Ala	Leu	Ser	Pro
65				70					75					80	
Arg	Leu	Glu	Arg	Ser	Gly	Thr	Ile	Ser	Thr	His	Cys	Lys	Leu	Arg	Leu
			85					90					95		
Pro	Gly	Ser	Arg	His	Ser	Pro	Ala	Ser	Ala	Ser					
			100					105							

<210> 4577

<211> 3525

<212> DNA

<213> Homo sapiens

<400> 4577

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<210> 4574  
<211> 103  
<212> PRT  
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<400> 4574  
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35 40 45  
Ala Gly Ala Val Gly Thr Pro Gly Lys Arg Gly Pro Ser Gly Pro Gln  
50 55 60  
Gly Leu Leu Gly Pro Pro Gly Pro Pro Ala Pro Val Gly Pro Pro His  
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Glu Thr Asn Pro Phe Thr Arg  
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<210> 4575  
<211> 1068  
<212> DNA  
<213> Homo sapiens

<400> 4575  
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<210> 4572

<211> 126

<212> PRT

<213> Homo sapiens

<400> 4572

Lys	Ser	Pro	Ser	Arg	Ala	Asn	Arg	Pro	Pro	Glu	Lys	Lys	Ala	Gln	Gly
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Lys	Thr	Gln	Gln	Asn	Arg	Lys	Leu	Thr	Asp	Phe	Tyr	Pro	Val	Arg	Arg
		20					25						30		
Ser	Ser	Arg	Lys	Ser	Lys	Ala	Glu	Leu	Gln	Ser	Glu	Glu	Arg	Lys	Arg
	35						40					45			
Ile	Asp	Glu	Leu	Ile	Glu	Ser	Gly	Lys	Glu	Glu	Gly	Met	Lys	Ile	Asp
	50				55					60					
Leu	Ile	Asp	Gly	Lys	Gly	Arg	Gly	Val	Ile	Ala	Thr	Lys	Gln	Phe	Ser
65					70					75				80	
Arg	Gly	Asp	Phe	Val	Val	Glu	Tyr	His	Gly	Asp	Leu	Ile	Glu	Ile	Thr
			85					90					95		
Asp	Ala	Lys	Lys	Arg	Glu	Ala	Leu	Tyr	Ala	Gln	Asp	Pro	Ser	Thr	Gly
		100					105					110			
Cys	Tyr	Met	Tyr	Tyr	Phe	Gln	Tyr	Leu	Ser	Lys	Thr	Tyr	Trp		
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<210> 4573

<211> 309

<212> DNA

<213> Homo sapiens

<400> 4573

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 120  
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&lt;211&gt; 141

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 4570

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Met Leu Leu Tyr Leu Phe Arg Arg Ala Ala Ser Ile Thr Leu Ala Thr
      20           25           30
Gln Thr Trp His Ile Arg Phe Gly Asp Asn Gly Leu Gly Thr Leu Met
      35           40           45
Leu Leu Gly Pro Gly Glu Thr Val Leu Arg Gln Lys Leu Gly Val Gln
      50           55           60
Gly Gly Pro Arg Val Arg His Cys Gly Glu Gly Asn Ala Gly Glu Ser
65      70           75           80
Gly Pro Thr Leu Gln Leu Gly Thr Arg Gly Arg Lys Gln Arg Gly Gln
      85           90           95
Ala Ser Val Pro Leu Pro Gln Glu Gln Thr Ser Gly Pro Gln Glu Gly
      100          105          110
Leu Gln Ala Ala Arg Ser Leu Pro Ser Ala Gly Gly Ser Arg Gly Arg
      115          120          125
Lys Gly Trp Arg Ala Ala Gly Arg Gln Pro Ser Thr Arg
      130          135          140

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&lt;210&gt; 4571

&lt;211&gt; 1084

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 4571

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180
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<212> PRT

<213> Homo sapiens

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&lt;210&gt; 4566

&lt;211&gt; 247

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 4566

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			20					25					30		
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<211> 354

<212> PRT

<213> Homo sapiens

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&lt;211&gt; 2037

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 4563

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Lys	Lys	Tyr	Phe	Ala	Lys	Ser	Gln	Ser	Lys	Ile	Thr	Arg	Leu	Ile	Thr
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Ala	Val	Val	Met	Lys	Asn	Trp	Lys	Glu	Ile	Val	Glu	Ser	Cys	Asp	Leu
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Asp	Glu	Phe	Ser	Ala	Leu	Cys	Asp	Leu	Leu	Gly	Thr	Arg	Leu	Glu	Asn
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Glu	Gly	Asp	Ser	Leu	Leu	Gln	Thr	Gln	Ala	Cys	Leu	Cys	Tyr	Ile	Cys
				645					650						655
Ala	Gly	Asn	Val	Glu	Lys	Leu	Val	Ala	Cys	Trp	Thr	Lys	Ala	Gln	Asp
			660					665						670	
Gly	Ser	His	Pro	Leu	Ser	Leu	Gln	Asp	Leu	Ile	Glu	Lys	Val	Val	Ile
			675					680						685	
Leu	Arg	Lys	Ala	Val	Gln	Leu	Thr	Gln	Ala	Met	Asp	Thr	Ser	Thr	Val
			690					695						700	
Gly	Val	Leu	Leu	Ala	Ala	Lys	Met	Ser	Gln	Tyr	Ala	Asn	Leu	Leu	Ala
705					710					715					720
Ala	Gln	Gly	Ser	Ile	Ala	Ala	Ala	Leu	Ala	Phe	Leu	Pro	Asp	Asn	Thr
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Asn	Gln	Pro	Asn	Ile	Met	Gln	Leu	Arg	Asp	Arg	Leu	Cys	Arg	Ala	Gln
			740						745					750	
Gly	Glu	Pro	Val	Ala	Gly	His	Glu	Ser	Pro	Lys	Ile	Pro	Tyr	Glu	Lys
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Gln	Gln	Leu	Pro	Lys	Gly	Arg	Pro	Gly	Pro	Val	Ala	Gly	His	His	Gln
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 Asp Leu Ser Asp Pro Ser Leu Asp Met Lys Ser Cys Ala Thr Phe Ser  
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 Ser Ser His Arg Tyr His Lys Leu Ile Trp Gly Pro Tyr Lys Met Asp  
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 Ser Glu Ile Tyr Ile Trp Asp Leu Asn Asn Phe Ala Thr Pro Met Thr  
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 165 170 175  
 Asn Arg Gln Val Gln His Ile Leu Ala Ser Ala Ser Pro Ser Gly Arg  
 180 185 190  
 Ala Thr Val Trp Asp Leu Arg Glu Asn Glu Pro Ile Ile Lys Val Ser  
 195 200 205  
 Asp His Ser Asn Arg Met His Cys Ser Gly Leu Ala Trp His Pro Asp  
 210 215 220  
 Val Ala Thr Gln Met Val Leu Ala Ser Glu Asp Asp Arg Leu Pro Val  
 225 230 235 240  
 Ile Gln Met Trp Asp Leu Arg Phe Ala Ser Ser Pro Leu Arg Val Leu  
 245 250 255  
 Glu Asn His Ala Arg Gly Ile Leu Ala Ile Ala Trp Ser Met Ala Asp  
 260 265 270  
 Pro Glu Leu Leu Leu Ser Cys Gly Lys Asp Ala Lys Ile Leu Cys Ser  
 275 280 285  
 Asn Pro Asn Thr Gly Glu Val Leu Tyr Glu Leu Pro Thr Asn Thr Gln  
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 405 410 415  
 Gly Ala Glu Gln Gln Gln Gln His His Val Phe Ile Ser Gln Val  
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 Val Thr Glu Lys Glu Phe Leu Ser Arg Ser Asp Gln Leu Gln Gln Ala  
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 Val Gln Ser Gln Gly Phe Ile Asn Tyr Cys Gln Lys Lys Ile Asp Ala

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&lt;210&gt; 4562

&lt;211&gt; 1182

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 4562

Met Lys Leu Lys Glu Val Asp Arg Thr Ala Met Gln Ala Trp Ser Pro

1

5

10

15

Ala Gln Asn His Pro Ile Tyr Leu Ala Thr Gly Thr Ser Ala Gln Gln

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His	Leu	His	Pro	His	Val	Gly	Arg	Thr	Leu	Thr	Ser	Ala	Asp	Pro	Phe
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<210> 4561  
 <211> 4172  
 <212> DNA  
 <213> Homo sapiens

<400> 4561  
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&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 4559

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&lt;210&gt; 4560

&lt;211&gt; 126

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 4560

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Lys Glu Pro Thr Gly Phe Ser Leu Asn Asn Pro Met Tyr Val Arg Ser
      20             25             30
Pro Cys Asp Pro Asp Arg Asp Gln Arg Tyr Leu Thr Thr Tyr Asn Gln
      35             40             45
Gly Tyr Phe Glu Asn Ile Pro Lys Gly Leu Asp Gln Glu Gly Trp Thr
      50             55             60
Arg Gly Gly Ile Gln Pro Gln Met Pro Gly Gly Tyr Ala Leu Ser Gln
      65             70             75             80
Pro Val Ser Cys Met Glu Ala Thr Pro Asn Pro Met Glu Ser Leu Arg

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65

&lt;210&gt; 4557

&lt;211&gt; 446

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 4557

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&lt;210&gt; 4558

&lt;211&gt; 148

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 4558

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Arg	Ala	Gly	Met	Ala	Cys	Pro	Ser	Pro	Leu	Leu	Thr	Pro	Ala	Pro	Ser
			20					25					30		
Lys	Ala	Val	Arg	Cys	Ala	Gln	Asp	His	Leu	Gly	His	Ser	His	Pro	Pro
			35				40					45			
Glu	Thr	Ser	Arg	Ala	Phe	Leu	Pro	Pro	Pro	Ser	Asp	Val	Arg	Val	Arg
			50				55				60				
Ser	Cys	Leu	Tyr	His	Trp	Ser	Ala	Thr	Ala	His	Leu	Pro	Pro	Leu	Ser
65					70				75					80	
Lys	Lys	Pro	Pro	Cys	Thr	Ile	Ser	His	Leu	Arg	Pro	Leu	Leu	Gly	Leu
				85					90					95	
Pro	Pro	Pro	Ser	Asp	Leu	His	Ile	Pro	Ser	Ala	Ala	Thr	Leu	Gly	Pro
			100					105					110		
Cys	Met	His	Trp	Pro	Pro	Pro	Ser	Asp	Ala	Pro	Cys	Thr	Ile	Ser	Leu
			115					120				125			
Ala	Leu	Asp	Ala	Leu	Leu	Gly	Leu	Pro	Pro	Pro	Ser	Asp	His	His	Ile
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&lt;210&gt; 4559

&lt;211&gt; 919

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<210> 4556

<211> 67

<212> PRT

<213> Homo sapiens

<400> 4556

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Leu	Asp	Thr	Pro	Gly	Val	Leu	Ala	Pro	Arg	Ile	Glu	Ser	Val	Glu	Thr
			20					25				30			
Gly	Leu	Lys	Leu	Ala	Leu	Cys	Gly	Thr	Val	Leu	Asp	His	Leu	Val	Gly
		35				40					45				
Glu	Glu	Thr	Met	Ala	Asp	Tyr	Leu	Leu	Tyr	Thr	Leu	Asn	Lys	His	Gln
		50				55					60				
Arg	Phe	Gly													

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 385 390 395 400  
 Gly Gln Asn Val Arg Gln Val His Phe Arg Asp Met Met Glu Ile Cys  
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 Ala Gly Ser Tyr Val Ser Phe His Cys Arg Ala Thr Ala Glu Pro Gln  
 435 440 445  
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 565 570 575  
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 580 585 590  
 Pro Thr Ile Tyr Gln Lys Asn Arg Lys Lys Cys Val Asn Val Thr Thr  
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 Ser  
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&lt;210&gt; 4555

&lt;211&gt; 1128

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 4555



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<211> 705

<212> PRT

<213> Homo sapiens

<400> 4554

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      820              825              830
Leu Trp Ile Ser Arg Asp Thr Ala Gly Pro Ala Ser Phe Ser Asp His
      835              840              845
Gln Ser Phe Ala Val Val Val Ala Leu Ser Cys Leu Leu Ser Ile Thr
      850              855              860
Met Glu Val Ile Leu Ile Ile Lys Tyr Trp Thr Ala Leu Cys Val Ala
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Cys Ser Gln Gln Gly Arg Gln Gly Arg Ala Pro Arg Arg Asp Pro Thr
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Gln Arg Thr Trp Glu Ser Gly Cys Gln Arg Trp Ala Ala Gly Arg Ala

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 Val Arg Lys Pro Glu Gly Ala Ile Cys Leu Tyr Thr Lys Gly Ala Asp  
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<212> PRT

<213> Homo sapiens

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Tyr	Val	Glu	Thr	Val	Asp	Ile	Asp	Gly	Glu	Thr	Asn	Leu	Lys	Phe	Arg
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Gln	Ala	Leu	Met	Val	Thr	His	Lys	Glu	Leu	Ala	Thr	Ile	Lys	Lys	Met
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<212> DNA

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3742

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&lt;210&gt; 4548

&lt;211&gt; 515

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 4548

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Glu	Gly	Glu	Glu	Glu	Lys	Pro	Glu	Pro	Asp	Ile	Ser	Ser	Glu	Glu	Ser
			20					25					30		
Val	Ser	Thr	Val	Glu	Glu	Gln	Glu	Asn	Glu	Thr	Pro	Pro	Ala	Thr	Ser

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&lt;210&gt; 4547

&lt;211&gt; 2211

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 4547

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<211> 380

<212> PRT

<213> Homo sapiens

<400> 4546

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Asp	Pro	Val	Lys	Gly	Arg	Gly	Ile	Arg	Ile	Leu	Ser	Ile	Asp	Gly	Gly
		35					40					45			
Gly	Thr	Arg	Gly	Val	Val	Ala	Leu	Gln	Thr	Leu	Arg	Lys	Leu	Val	Glu
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Leu	Thr	Gln	Lys	Pro	Val	His	Gln	Leu	Phe	Asp	Tyr	Ile	Cys	Gly	Val
65					70					75				80	
Ser	Thr	Gly	Ala	Ile	Leu	Ala	Phe	Met	Leu	Gly	Leu	Phe	His	Met	Pro
			85						90					95	
Leu	Asp	Glu	Cys	Glu	Glu	Leu	Tyr	Arg	Lys	Leu	Gly	Ser	Asp	Val	Phe
			100					105					110		
Ser	Gln	Asn	Val	Ile	Val	Gly	Thr	Val	Lys	Met	Ser	Trp	Ser	His	Ala
		115					120					125			
Phe	Tyr	Asp	Ser	Gln	Thr	Trp	Glu	Asn	Ile	Leu	Lys	Asp	Arg	Met	Gly
		130				135					140				
Ser	Ala	Leu	Met	Ile	Glu	Thr	Ala	Arg	Asn	Pro	Thr	Cys	Pro	Lys	Val
145					150					155				160	
Ala	Ala	Val	Ser	Thr	Ile	Val	Asn	Arg	Gly	Ile	Thr	Pro	Lys	Ala	Phe
			165						170					175	
Val	Phe	Arg	Asn	Tyr	Gly	His	Phe	Pro	Gly	Ile	Asn	Ser	His	Tyr	Leu
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		210				215					220				
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225					230					235				240	
Cys	Lys	Cys	Leu	Trp	Pro	Asp	Val	Pro	Leu	Glu	Cys	Ile	Val	Ser	Leu
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3180

&lt;400&gt; 4545

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<211> 150

<212> PRT

<213> Homo sapiens

<400> 4544

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			20					25					30		
His	Lys	Leu	Gln	Gly	Ala	Ala	Ala	Val	Ser	Leu	Ala	Arg	His	Trp	Pro
		35					40					45			
Ile	Thr	Ser	Asn	Arg	Leu	Gly	Arg	Ala	Pro	Val	Glu	Ser	Pro	Val	Pro
	50					55					60				
Ser	His	Phe	Arg	Arg	Val	Ala	Leu	Leu	Pro	Arg	Ser	Arg	Ser	Gln	Trp
65					70					75				80	
Pro	Asp	Lys	Gln	Ser	His	Ser	Gly	Val	Val	Arg	Pro	Gly	Arg	Val	Ser
			85					90					95		
Pro	Val	Gly	Gly	Arg	Gly	Ala	Leu	Ala	Arg	Arg	Val	Ser	Gly	Glu	Ala
		100					105						110		
Lys	Cys	Lys	Ala	Leu	Val	Arg	Gly	Ala	Ser	Gly	Ser	His	Gly	Gly	Ala
		115					120					125			
Ala	Gly	Gln	Gly	Pro	Ala	Val	Thr	Arg	Ser	Pro	Ser	Ser	Leu	Cys	Leu
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<210> 4545

<211> 3568

<212> DNA

<213> Homo sapiens

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 452

&lt;210&gt; 4542

&lt;211&gt; 128

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 4542

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Leu	Trp	Ile	Asn	Arg	Phe	Tyr	Ile	Tyr	Leu	Gly	Phe	Ala	Val	Ser	Ile
			20					25					30		
Ser	Leu	Trp	Ile	Cys	Val	Gln	Ile	Val	Ile	Lys	Thr	Gln	Gly	Lys	Asn
		35				40						45			
Leu	Gln	Glu	Lys	Ser	Val	Pro	Lys	Ala	Ala	Gln	Asp	Leu	Met	Thr	Asn
	50					55					60				
Gly	Tyr	Val	Ser	Leu	Gln	Glu	Lys	Asp	Ile	Phe	Val	Ser	Gly	Val	Lys
65				70						75				80	
Ile	Phe	Tyr	Gly	Ser	Gln	Thr	Gly	Thr	Ala	Lys	Gly	Phe	Ala	Thr	Val
			85					90						95	
Leu	Ala	Glu	Ala	Val	Thr	Ser	Leu	Asp	Leu	Pro	Val	Ala	Ile	Ile	Asn
			100					105					110		
Leu	Lys	Glu	Tyr	Asp	Pro	Asp	Asp	His	Leu	Ile	Glu	Glu	Val	Thr	Ser
		115					120						125		

&lt;210&gt; 4543

&lt;211&gt; 815

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 4543

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 180



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385              390              395              400
Asp Glu Cys Pro Leu Asp Gln Gly Leu Pro Lys Leu Ser Ala Glu Ala
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Val Phe Glu Lys Cys Ser Gln Ile Ser Leu Ser Gln Ser Thr Thr Ala
      420              425              430
Ser Leu Ser Lys Lys
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<210> 4539  
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 <212> DNA  
 <213> Homo sapiens

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240
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331

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<210> 4540  
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 <213> Homo sapiens

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Thr Arg Ser Leu Gly Glu Asn Gln Arg Val Ile Asn Glu Leu Thr Trp
      20              25              30
Lys Leu Gln Gln Glu Gln Arg Gln Val Glu Glu Leu Arg Met Gln Leu
      35              40              45
Gln Lys Gln Lys Arg Asn Asn Cys Ser Glu Lys Lys Pro Leu Pro Phe
      50              55              60
Leu Ala Ala Ser Ile Lys Gln Glu Glu Ala Val Ser Ser Cys Pro Phe
65              70              75              80
Ala Ser Gln Val Pro Val Lys Arg Gln Ser Ser Ser Ser Lys Cys His
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Pro Pro Ala

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<210> 4541  
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&lt;210&gt; 4538

&lt;211&gt; 437

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 4538

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Ser Ala Leu Ala Leu Ala Phe Tyr Leu Ala Lys Thr Thr Glu Ala Glu
      20           25           30
Glu Val Phe Val Pro Val Leu Asn Ile Lys Arg Ser Glu Leu Pro Leu
      35           40           45
Arg Gly Asp Ile Val Phe Phe Leu Gln Lys Val His Ile Pro Glu Ser
 50           55           60
Ile Leu Ile Phe Arg Asp Glu Ile Asp Leu His Ala Leu Tyr Gln Ala
 65           70           75           80
Gly Gln Leu Thr Leu Ile Leu Val Asp His His Ile Leu Ser Lys Ser
      85           90           95
Asp Thr Ala Leu Glu Glu Xaa Ser Ser Arg Gly Ala Arg Pro Ser Thr
      100          105          110
His Arg Ala Glu Thr Leu Pro Ser Leu Xaa His Val Ser Val Glu Leu
      115          120          125
Val Gly Ser Cys Ala Thr Leu Val Thr Glu Arg Ile Leu Gln Gly Ala
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Pro Glu Ile Leu Asp Arg Gln Thr Ala Ala Leu Leu His Gly Thr Ile
 145          150          155          160
Ile Leu Asp Cys Val Asn Met Asp Leu Lys Ile Gly Lys Ala Thr Pro
      165          170          175
Lys Asp Ser Lys Tyr Val Glu Lys Leu Glu Ala Leu Phe Pro Asp Leu
      180          185          190
Pro Lys Arg Asn Asp Ile Phe Asp Ser Leu Gln Lys Ala Lys Phe Asp
      195          200          205
Val Ser Gly Leu Thr Thr Glu Gln Met Leu Arg Lys Asp Gln Lys Thr
 210          215          220
Ile Tyr Arg Gln Gly Val Lys Val Ala Ile Ser Ala Ile Tyr Met Asp
 225          230          235          240
Leu Glu Ala Phe Leu Gln Arg Ser Asn Leu Leu Ala Asp Leu His Ala
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Phe Cys Gln Ala His Ser Tyr Asp Val Leu Val Ala Met Thr Ile Phe
      260          265          270
Phe Asn Thr His Asn Glu Pro Val Arg Gln Leu Ala Ile Phe Cys Pro
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His Val Ala Leu Gln Thr Thr Ile Cys Glu Val Leu Glu Arg Ser His
 290          295          300
Ser Pro Pro Leu Lys Leu Thr Pro Ala Ser Ser Thr His Pro Asn Leu
 305          310          315          320
His Ala Tyr Leu Gln Gly Asn Thr Gln Val Ser Arg Lys Lys Leu Leu
      325          330          335
Pro Leu Leu Gln Glu Ala Leu Ser Ala Tyr Phe Asp Ser Met Lys Ile
      340          345          350
Pro Ser Gly Gln Pro Glu Thr Ala Asp Val Ser Arg Glu Gln Val Asp
      355          360          365
Lys Glu Leu Asp Arg Ala Ser Asn Ser Leu Ile Ser Gly Leu Ser Gln

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2760  
ttttgttata ctattaaata attttttcct gttaaaaaaa aaaaaaaaaa a  
2811

```

      20      25      30
Pro Arg Phe Lys Gln Phe Ser Xaa Leu Ser Leu Pro Ser Ser Trp Asp
      35      40      45
Tyr Arg Arg Pro Pro Pro Arg Pro Ala Asn Phe Cys Ile Phe Ser Arg
      50      55      60
Asn Gly Val Ser Pro Ser Arg Pro Gly Trp Ser
      65      70      75

<210> 4537
<211> 2811
<212> DNA
<213> Homo sapiens

<400> 4537
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480
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1200

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```

      115              120              125
Thr Cys Gln Thr Met Ala Val Cys Asn Thr Gln Tyr Tyr Trp Tyr Asp
      130              135              140
Glu Arg Gly Lys Lys Val Lys Cys Thr Ala Pro Gln Tyr Val Asp Phe
145              150              155              160
Val Met Ser Ser Val Gln Lys Leu Val Thr Asp Glu Asp Val Phe Pro
      165              170              175
Thr Lys Tyr Gly Arg Glu Phe Pro Ser Ser Phe Glu Ser Leu Val Arg
      180              185              190
Lys Ile Cys Arg His Leu Phe His Val Leu Ala His Ile Tyr Trp Ala
      195              200              205
His Phe Lys Glu Thr Leu Ala Leu Glu Leu His Gly His Leu Asn Thr
      210              215              220
Leu Tyr Val His Phe Ile Leu Phe Ala Arg Glu Phe Asn Leu Leu Asp
225              230              235              240
Pro Lys Glu Thr Ala Ile Met Asp Asp Leu Thr Glu Val Leu Cys Ser
      245              250              255
Gly Ala Gly Gly Val His Ser Gly Gly Ser Gly Asp Gly Ala Gly Ser
      260              265              270
Gly Gly Pro Gly Ala Gln Asn His Val Lys Glu Arg
      275              280

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&lt;210&gt; 4535

&lt;211&gt; 473

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 4535

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300
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473

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&lt;210&gt; 4536

&lt;211&gt; 75

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 4536

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Arg Leu Phe Phe Phe Phe Phe Glu Met Glu Ser Arg Ser Val Thr
1              5              10              15
Gln Ala Gly Val Gln Trp His Asp His Ser Ser Leu Gln Pro Leu Pro

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 180  
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 240  
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 300  
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 360  
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 420  
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 480  
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 720  
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 960  
 acacgcgt  
 968

&lt;210&gt; 4534

&lt;211&gt; 284

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 4534

Thr	Arg	Ala	Gln	His	Met	Cys	Ala	His	Ala	Asp	Ala	Gly	Glu	Asn	Thr
1				5				10					15		
His	His	Arg	Leu	Phe	Ala	His	Val	Cys	Pro	Cys	Pro	Asp	Ala	Gly	Ala
			20				25					30			
Glu	Ala	Asp	Arg	Val	Gly	Gln	Arg	Ala	Arg	Arg	Pro	Arg	Ala	Ala	Met
		35				40					45				
Asp	Trp	Leu	Met	Gly	Lys	Ser	Lys	Ala	Lys	Pro	Asn	Gly	Lys	Lys	Pro
	50				55					60					
Ala	Ala	Glu	Glu	Arg	Lys	Ala	Tyr	Leu	Glu	Pro	Glu	His	Thr	Lys	Ala
65				70				75						80	
Arg	Ile	Thr	Asp	Phe	Gln	Phe	Lys	Glu	Leu	Val	Val	Leu	Pro	Arg	Glu
			85				90					95			
Ile	Asp	Leu	Asn	Glu	Trp	Leu	Ala	Ser	Asn	Thr	Thr	Thr	Phe	Phe	His
		100					105					110			
His	Ile	Asn	Leu	Gln	Tyr	Ser	Thr	Ile	Ser	Glu	Phe	Cys	Thr	Gly	Glu

<210> 4532  
 <211> 296  
 <212> PRT  
 <213> Homo sapiens

<400> 4532  
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 Ser Lys Lys Pro Glu Arg Arg Pro Arg Gly Arg Arg Arg Gly Arg Lys  
 35 40 45  
 Cys Gly Arg Gly His Lys Gly Glu Arg Gln Arg Gly Thr Arg Pro Arg  
 50 55 60  
 Leu Gly Phe Glu Gly Gly Gln Thr Pro Phe Tyr Ile Arg Ile Pro Lys  
 65 70 75 80  
 Tyr Gly Phe Asn Glu Gly His Ser Phe Arg Arg Gln Tyr Lys Pro Leu  
 85 90 95  
 Ser Leu Asn Arg Leu Gln Tyr Leu Ile Asp Leu Gly Arg Val Asp Pro  
 100 105 110  
 Ser Gln Pro Ile Asp Leu Thr Gln Leu Val Asn Gly Arg Gly Val Thr  
 115 120 125  
 Ile Gln Pro Leu Lys Arg Asp Tyr Gly Val Gln Leu Val Glu Glu Gly  
 130 135 140  
 Ala Asp Thr Phe Thr Ala Lys Val Asn Ile Glu Val Gln Leu Ala Ser  
 145 150 155 160  
 Glu Leu Ala Ile Ala Ala Ile Glu Lys Asn Gly Gly Val Val Thr Thr  
 165 170 175  
 Ala Phe Tyr Asp Pro Arg Ser Leu Asp Ile Val Cys Lys Pro Val Pro  
 180 185 190  
 Phe Phe Leu Arg Gly Gln Pro Ile Pro Lys Arg Met Leu Pro Pro Glu  
 195 200 205  
 Glu Leu Val Pro Tyr Tyr Thr Asp Ala Lys Asn Arg Gly Tyr Leu Ala  
 210 215 220  
 Asp Pro Ala Lys Phe Pro Glu Ala Arg Leu Glu Leu Ala Arg Lys Tyr  
 225 230 235 240  
 Gly Tyr Ile Leu Pro Asp Ile Thr Lys Asp Glu Leu Phe Lys Met Leu  
 245 250 255  
 Cys Thr Arg Lys Asp Pro Arg Gln Ile Phe Phe Gly Leu Ala Pro Gly  
 260 265 270  
 Trp Val Val Asn Met Ala Asp Lys Lys Ile Leu Lys Pro Thr Asp Glu  
 275 280 285  
 Asn Leu Leu Lys Tyr Tyr Thr Ser  
 290 295

<210> 4533  
 <211> 968  
 <212> DNA  
 <213> Homo sapiens

<400> 4533  
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&lt;210&gt; 4531

&lt;211&gt; 1414

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 4531

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120  
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180  
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240  
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300  
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360  
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420  
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1380  
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1414



145                      150                      155                      160  
 Pro Pro Pro Trp Leu Ser Ile Ile Ser Asp Ser Gly Thr Gln Thr Pro  
                          165                      170                      175  
 Ser Pro Arg Arg Cys Pro Ala Arg Pro Ser Pro Trp Gly Pro Gln Cys  
                          180                      185                      190  
 Trp Arg Gly Gly Arg Ile Ala Ser Ala Glu Ala Ser Ser Thr  
                          195                      200                      205

&lt;210&gt; 4529

&lt;211&gt; 546

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 4529

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 aagatggagg agaaacctc agggcccctc ccggacatgc tggccactgc agagcccagc  
 180  
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 546

&lt;210&gt; 4530

&lt;211&gt; 84

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 4530

Met Glu Glu Lys Pro Ser Gly Pro Ile Pro Asp Met Leu Ala Thr Ala  
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 Glu Pro Ser Ser Ser Glu Thr Asp Lys Glu Val Leu Ser Pro Ala Val  
                          20                      25                      30  
 Pro Ala Ala Ala Pro Ser Ser Ser Met Ser Glu Glu Pro Gly Pro Glu  
                          35                      40                      45  
 Gln Ala Ala Thr Pro Pro Val Gly Asn Val Glu Gly Leu Glu Gly Cys  
                          50                      55                      60  
 Ser Arg Ala Pro Pro Gln Pro Gln Thr Ala Ala Ser Leu Ala Pro Asp  
 65                      70                      75                      80  
 Pro Ala Leu Ala

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<210> 4528
<211> 206
<212> PRT
<213> Homo sapiens
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3725

&lt;400&gt; 4526

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 20 25 30  
 Glu Ala Val Asp Thr Ile Gln Pro Glu Thr Gly Ser Gln Ala Ser Ser  
 35 40 45  
 Glu Gln Pro Gly Gln Leu Ile Ser Phe Ser Glu Ala Leu Gln His Phe  
 50 55 60  
 Gln Thr Val Asp Leu Ser Pro Phe Lys Lys Arg Ile Gln Pro Thr Ile  
 65 70 75 80  
 Arg Arg Thr Gly Leu Ala Ala Leu Arg His Tyr Leu Phe Gly Pro Pro  
 85 90 95  
 Lys Leu His Gln Arg Leu Arg Glu Glu Arg Asp Leu Val Leu Thr Ile  
 100 105 110  
 Ala Gln Cys Gly Leu Asp Ser Gln Asp Pro Val His Gly Arg Val Leu  
 115 120 125  
 Gln Thr Ile Tyr Lys Lys Leu Thr Gly Ser Lys Phe Asp Cys Ala Leu  
 130 135 140  
 His Gly Asn His Trp Glu Asp Leu Gly Phe Gln Gly Ala Asn Pro Ala  
 145 150 155 160  
 Thr Asp Leu Arg Gly Ala Gly Phe Leu Ala Leu Leu His Leu Leu Tyr  
 165 170 175  
 Leu Val Met Asp Ser Lys Thr Leu Pro Met Ala Gln Glu Ile Phe Arg  
 180 185 190  
 Leu Ser Arg His His Ile Gln Gln Phe Pro Phe Cys Leu Met Ser Val  
 195 200 205  
 Asn Ile Thr His Ile Ala Ile Gln Ala Leu Arg Glu Glu Cys Leu Ser  
 210 215 220  
 Arg Glu Cys Asn Arg Gln Gln Lys Val Ile Pro Val Val Asn Ser Phe  
 225 230 235 240  
 Tyr Ala Ala Thr Phe Leu His Leu Ala His Val Trp Arg Thr Gln Arg  
 245 250 255  
 Lys Thr Ile Ser Asp Ser Gly Phe Val Leu Lys Gly Val Leu Phe Leu  
 260 265 270  
 Leu Gly Arg Pro Arg Leu Asn Ala Gln Cys Pro Arg Ser Arg Glu Pro  
 275 280 285  
 Lys Val Val Ala Arg Leu Val Leu Ala Ala Val Leu Pro His Pro His  
 290 295 300  
 Phe Leu Lys Phe Gln Leu Thr Lys Ile Ser Ile Thr His Pro Leu Glu  
 305 310 315 320  
 Ser Ala Ser Ser Pro Phe Ser Ala Leu Thr Val Ala Leu Phe Trp Ser  
 325 330 335  
 Tyr Thr Tyr Asp Lys His Ile Phe  
 340

&lt;210&gt; 4527

&lt;211&gt; 885

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 4527

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360  
gaccacagtgc atggccgagt cctccagacc atctataaga agctgaccgg ctccaagttt  
420  
gactgtgccc ttcattgaaa ccactgggag gacctgggct ttcagggagc gaatccagcc  
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gccatgtcag gagcctggcc aggccgacc ccttgctgtc tcagcagatg ggatatagga  
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1680  
gctagacttc accccttcc cgcagacctg cctccagagc aaggagaatt c  
1731

&lt;210&gt; 4526

&lt;211&gt; 344

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;213&gt; Homo sapiens

&lt;400&gt; 4524

Ala Leu Tyr Ile Leu Val Cys Thr Arg Asp Ser Ser Ala Arg Leu Leu  
 1 5 10 15  
 Gly Lys Thr Lys Asp Thr Pro Arg Leu Ser Leu Xaa Leu Val Ile Leu  
 20 25 30  
 Gly Val Ile Phe Met Asn Gly Asn Arg Ala Ser Glu Ala Val Leu Trp  
 35 40 45  
 Glu Ala Leu Arg Lys Met Gly Leu Arg Pro Gly Val Arg His Pro Phe  
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 Leu Gly Asp Leu Arg Lys Leu Ile Thr Asp Asp Phe Val Lys Gln Lys  
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 Tyr Leu Glu Tyr Lys Lys Ile Pro Asn Ser Asn Pro Pro Glu Tyr Glu  
 85 90 95  
 Phe Leu Trp Gly Leu Arg Ala Arg His Glu Thr Ser Lys Met Arg Val  
 100 105 110  
 Leu Arg Phe Ile Ala Gln Asn Gln Asn Arg Asp Pro Arg Glu Trp Lys  
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 Ala His Phe Leu Glu Ala Val Asp Asp Ala Phe Lys Thr Met Asp Val  
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 Asp Met Ala Glu Glu His Ala Arg Ala Gln Met Arg Ala Gln Met Asn  
 145 150 155 160  
 Ile Gly Asp Glu Ala Leu Ile Gly Arg Trp Ser Trp Asp Asp Ile Gln  
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 Val Glu Leu Leu Thr Trp Asp Glu Asp Gly Asp Phe Gly Asp Ala Trp  
 180 185 190  
 Ala Arg Ile Pro Phe Ala Phe Trp Ala Arg Tyr His Gln Tyr Ile Leu  
 195 200 205  
 Asn Ser Asn Arg Ala Asn Arg Arg Ala Thr Trp Arg Ala Gly Val Ser  
 210 215 220  
 Ser Gly Thr Asn Gly Gly Ala Ser Thr Ser Val Leu Asp Gly Pro Ser  
 225 230 235 240  
 Thr Ser Ser Thr Ile Arg Thr Arg Asn Ala Arg Ala Gly Ala Ser  
 245 250 255  
 Phe Phe Ser Trp Ile Gln  
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&lt;210&gt; 4525

&lt;211&gt; 1731

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 4525

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130		135		140											
Gly	Ala	Leu	Ser	Leu	His	Leu	Pro	Glu	Gly	Arg	Asn	Ala	Val	Ser	Leu
145				150					155					160	
Gln	His	Arg	Arg	Asn	Thr	Ser	Glu	Lys	Lys	Ser	Ser	Arg	Lys	Val	Glu
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Asn	Lys	Glu	Met	Glu	Tyr	Ile	Tyr	Glu	Asn	Tyr	Tyr	Ile			
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&lt;210&gt; 4523

&lt;211&gt; 1022

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 4523

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aa
1022

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&lt;210&gt; 4524

&lt;211&gt; 262

&lt;212&gt; PRT

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&lt;210&gt; 4522

&lt;211&gt; 189

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 4522

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His	Thr	Glu	Thr	Ala	Ser	Ser	Phe	Gln	Pro	Ser	Pro	Phe	Ser	Ala	Asp
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Phe	Glu	Leu	Gln	Ile	Ser	Leu	Leu	Tyr	Leu	Glu	Ser	Pro	Ile	Ser	Leu
			50			55					60				
Gln	Glu	Phe	Ala	Leu	Ser	Phe	Ile	Ile	Ile	Leu	Val	Tyr	Val	Leu	Asp
65					70					75				80	
Trp	Ala	Ala	Ile	Thr	Arg	Cys	His	Arg	Leu	Ser	Gly	Leu	Asn	Asn	Lys
			85					90					95		
His	Ser	Tyr	Pro	Thr	Val	Thr	Glu	Ala	Glu	Lys	Pro	Gly	Val	Lys	Val
			100					105					110		
Pro	Ala	Trp	Ser	Asp	Ser	Val	Leu	Glu	Ala	Gly	Lys	Ser	Lys	Met	Glu
			115				120					125			
Ala	Leu	Val	Gly	Leu	Val	Ser	Gly	Arg	Ala	Ser	Leu	Cys	Phe	Gln	Asp

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Trp Ser Pro Cys Ser Lys Thr Cys His Asp Met Val Ser Pro Ala Gly				
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Thr Arg Val Arg Thr Arg Thr Ile Arg Gln Phe Pro Ile Gly Ser Glu				
	325		330	335
Lys Glu Cys Pro Glu Phe Glu Glu Lys Glu Pro Cys Leu Ser Gln Gly				
	340		345	350
Asp Gly Val Val Pro Cys Ala Thr Tyr Gly Trp Arg Thr Thr Glu Trp				
	355		360	365
Thr Glu Cys Arg Val Asp Pro Leu Leu Ser Gln Gln Asp Lys Arg Arg				
	370		375	380
Gly Asn Gln Thr Ala Leu Cys Gly Gly Gly Ile Gln Thr Arg Glu Val				
385		390		395
Tyr Cys Val Gln Ala Asn Glu Asn Leu Leu Ser Gln Leu Ser Thr His				
	405		410	415
Lys Asn Lys Glu Ala Ser Lys Pro Met Asp Leu Lys Leu Cys Thr Gly				
	420		425	430
Pro Ile Pro Asn Thr Thr Gln Leu Cys His Ile Pro Cys Pro Thr Glu				
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Cys Glu Val Ser Pro Trp Ser Ala Trp Gly Pro Cys Thr Tyr Glu Asn				
	450		455	460
Cys Asn Asp Pro Gln Gly Lys Lys Gly Phe Lys Leu Arg Lys Arg Arg				
465		470		475
Ile Thr Asn Glu Pro Thr Gly Gly Ser Gly Leu Thr Gly Asn Cys Pro				
	485		490	495
His Leu Leu Glu Ala Ile Pro Cys Glu Glu Pro Ala Cys Tyr Asp Trp				
	500		505	510
Lys Ala Val Arg Leu Gly Asp Cys Glu Pro Asp Asn Gly Lys Glu Cys				
	515		520	525
Gly Pro Gly Thr Gln Val Gln Glu Val Val Cys Ile Asn Ser Asp Gly				
	530		535	540
Glu Glu Val Asp Arg Gln Leu Cys Arg Asp Ala Ile Phe Pro Ile Pro				
545		550		555
Val Ala Cys Asp Ala Pro Cys Pro Lys Asp Cys Val Leu Ser Thr Trp				
	565		570	575
Ser Thr Trp Ser Ser Cys Ser His Thr Cys Ser Gly Lys Thr Thr Glu				
	580		585	590
Gly Lys Gln Ile Arg Ala Arg Ser Ile Leu Ala Tyr Ala Gly Glu Glu				
	595		600	605
Gly Glu Ser Pro Ala Ser Asp Ala Ile				
610		615		

&lt;210&gt; 4521

&lt;211&gt; 1071

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 4521

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180



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<210> 4520

<211> 617

<212> PRT

<213> Homo sapiens

<400> 4520

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Thr	Asn	Cys	Lys	Gln	Ala	Glu	Arg	Pro	Asn	Asn	Gln	Gln	Asn	Cys	Phe	35	40	45	
Lys	Val	Cys	Asp	Trp	His	Lys	Glu	Leu	Tyr	Asp	Trp	Arg	Leu	Gly	Pro	50	55	60	
Trp	Asn	Gln	Cys	Gln	Pro	Val	Ile	Ser	Lys	Ser	Leu	Glu	Lys	Pro	Leu	65	70	75	80
Glu	Cys	Ile	Lys	Gly	Glu	Glu	Gly	Ile	Gln	Val	Arg	Glu	Ile	Ala	Cys	85	90	95	
Ile	Gln	Lys	Asp	Lys	Asp	Ile	Pro	Ala	Glu	Asp	Ile	Ile	Cys	Glu	Tyr	100	105	110	
Phe	Glu	Pro	Lys	Pro	Leu	Leu	Glu	Gln	Ala	Cys	Leu	Ile	Pro	Cys	Gln	115	120	125	
Gln	Asp	Cys	Ile	Val	Ser	Glu	Phe	Ser	Ala	Trp	Ser	Glu	Cys	Ser	Lys	130	135	140	
Thr	Cys	Gly	Ser	Gly	Leu	Gln	His	Arg	Thr	Arg	His	Val	Val	Ala	Pro	145	150	155	160
Pro	Gln	Phe	Gly	Gly	Ser	Gly	Cys	Pro	Asn	Leu	Thr	Glu	Phe	Gln	Val	165	170	175	
Cys	Gln	Ser	Ser	Pro	Cys	Glu	Ala	Glu	Glu	Leu	Arg	Tyr	Ser	Leu	His	180	185	190	
Val	Gly	Pro	Trp	Ser	Thr	Cys	Ser	Met	Pro	His	Ser	Arg	Gln	Val	Arg	195	200	205	
Gln	Ala	Arg	Arg	Arg	Gly	Lys	Asn	Lys	Glu	Arg	Glu	Lys	Asp	Arg	Ser	210	215	220	
Lys	Gly	Val	Lys	Asp	Pro	Glu	Ala	Arg	Glu	Leu	Ile	Lys	Lys	Lys	Arg	225	230	235	240
Asn	Arg	Asn	Arg	Gln	Asn	Arg	Gln	Glu	Asn	Lys	Tyr	Trp	Asp	Ile	Gln	245	250	255	
Ile	Gly	Tyr	Gln	Thr	Arg	Glu	Val	Met	Cys	Ile	Asn	Lys	Thr	Gly	Lys	260	265	270	
Ala	Ala	Asp	Leu	Ser	Phe	Cys	Gln	Gln	Glu	Lys	Leu	Pro	Met	Thr	Phe	275	280	285	
Gln	Ser	Cys	Val	Ile	Thr	Lys	Glu	Cys	Gln	Val	Ser	Glu	Trp	Ser	Glu				

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<210> 4519
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<212> DNA
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3716

&lt;211&gt; 650

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 4518

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Val Ser Ser Leu Leu Leu Gln Glu Glu Glu Pro Leu Ala Gly Gly Lys
      35          40          45
Pro Gly Ala Asp Gly Gly Ser Leu Glu Ala Val Arg Leu Gly Pro Ser
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Ser Gly Leu Leu Val Asp Trp Leu Glu Met Leu Asp Pro Glu Val Val
65          70          75          80
Ser Ser Cys Pro Asp Leu Gln Leu Arg Leu Leu Phe Ser Arg Arg Lys
      85          90          95
Gly Lys Gly Gln Ala Gln Val Pro Ser Phe Arg Pro Tyr Leu Leu Thr
      100          105          110
Leu Phe Thr His Gln Ser Ser Trp Pro Thr Leu His Gln Cys Ile Arg
      115          120          125
Val Leu Leu Gly Lys Ser Arg Glu Gln Arg Phe Asp Pro Ser Ala Ser
      130          135          140
Leu Asp Phe Leu Trp Ala Cys Ile His Val Pro Arg Ile Trp Gln Gly
145          150          155          160
Arg Asp Gln Arg Thr Pro Gln Lys Arg Arg Glu Glu Leu Val Leu Arg
      165          170          175
Val Gln Gly Pro Glu Leu Ile Ser Leu Val Glu Leu Ile Leu Ala Glu
      180          185          190
Ala Glu Thr Arg Ser Gln Asp Gly Asp Thr Ala Ala Cys Ser Leu Ile
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225          230          235          240
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Tyr Leu Gln Arg Pro Glu Leu Arg Val Pro Val Pro Glu Val Leu Leu
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His Ser Glu Gly Ala Ala Ser Ser Ser Val Cys Lys Leu Asp Gly Leu
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Ile His Arg Phe Ile Thr Leu Leu Ala Asp Thr Ser Asp Ser Arg Ala
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Leu Leu His Gly Arg Thr His Leu Asn Phe Gln Glu Phe Arg Gln Gln
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[illegible]

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<211> 2275

<212> DNA

<213> Homo sapiens

<400> 4517

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720

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Val Asn Cys Gly Asp Leu Gln Pro Ala Gly Pro Glu Ser Pro Gly Arg				
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Phe Leu Ala Arg Phe Leu Ala Asn Thr Ser Phe Gln Gly Arg Thr Gly				
	340	345		350
Pro Val Trp Val Thr Gly Ser Ser Gln Val His Met Ser Arg His Phe				
	355	360		365
Lys Val Trp Ser Leu Arg Arg Asp Pro Arg Gly Ala Pro Ala Trp Ala				
	370	375		380
Thr Val Gly Ser Trp Arg Tyr Gly Gln Leu Asp Leu Glu Pro Gly Gly				
385	390	395		400
Ala Ser Ala Trp Pro Pro Pro Pro Gln Gly Ala Gln Val Arg Pro Lys				
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Leu Arg Val Val Thr Leu Leu Glu His Pro Phe Val Phe Ala Arg Asp				
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Pro Asp Glu Asp Gly Gln Cys Pro Ala Gly Gln Leu Cys Leu Asp Pro				
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Gly Thr Asn Asp Ser Ala Thr Leu Asp Ala Leu Phe Ala Ala Leu Ala				
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Asn Gly Ser Ala Pro Arg Ala Leu Arg Lys Cys Cys Tyr Gly Tyr Cys				
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Ile Asp Leu Leu Glu Arg Leu Ala Glu Asp Thr Pro Phe Asp Phe Glu				
	485	490		495
Leu Tyr Leu Val Gly Asp Gly Lys Tyr Gly Ala Leu Arg Asp Gly Arg				
	500	505		510
Trp Thr Gly Leu Val Gly Asp Leu Leu Ala Gly Arg Ala His Met Ala				
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Val Thr Ser Phe Ser Ile Asn Ser Ala Arg Ser Gln Val Val Asp Phe				
	530	535		540
Thr Ser Pro Phe Phe Ser Thr Ser Leu Gly Ile Met Val Arg Ala Arg				
545	550	555		560
Asp Thr Ala Ser Pro Ile Gly Ala Phe Met Trp Pro Leu His Trp Ser				
	565	570		575
Thr Trp Leu Gly Val Phe Ala Ala Leu His Leu Thr Ala Leu Phe Leu				
	580	585		590
Thr Val Tyr Glu Trp Arg Ser Pro Tyr Gly Leu Thr Pro Arg Gly Arg				
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Asn Arg Ser Thr Val Phe Ser Tyr Ser Ser Ala Leu Asn Leu Cys Tyr				
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Ala Ile Leu Phe Arg Arg Thr Val Ser Ser Lys Thr Pro Lys Cys Pro				
625	630	635		640
Thr Gly Arg Leu Leu Met Asn Leu Trp Ala Ile Phe Cys Leu Leu Val				
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Leu Ser Ser Tyr Thr Ala Asn Leu Ala Ala Val Met Val Gly Asp Lys				
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Thr Phe Glu Leu Ser Gly Ile His Asp Pro Lys Leu His His Pro				
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Ala Gln Gly Phe Arg Phe Gly Thr Val Trp Glu Ser Ser Ala Glu Ala				
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Tyr Ile Lys Lys Ser Phe Pro Asp Met His Ala His Met Arg Arg His				
705	710	715		720
Ser Ala Pro Thr Thr Pro Arg Gly Val Ala Met Leu Thr Ser Asp Pro				

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<210> 4516

<211> 901

<212> PRT

<213> Homo sapiens

<400> 4516

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Leu	Gly	Gly	Ser	Val	Arg	Leu	Gly	Ala	Leu	Leu	Pro	Arg	Ala	Pro	Leu
		35					40					45			
Ala	Arg	Ala	Arg	Ala	Arg	Ala	Ala	Leu	Ala	Arg	Ala	Ala	Leu	Ala	Pro
	50					55				60					
Arg	Leu	Pro	His	Asn	Leu	Ser	Leu	Glu	Leu	Val	Val	Ala	Ala	Pro	Pro
65				70					75					80	
Ala	Arg	Asp	Pro	Ala	Ser	Leu	Thr	Arg	Gly	Leu	Cys	Gln	Ala	Leu	Val
			85						90				95		
Pro	Pro	Gly	Val	Ala	Ala	Leu	Leu	Ala	Phe	Pro	Glu	Ala	Arg	Pro	Glu
			100					105					110		
Leu	Leu	Gln	Leu	His	Phe	Leu	Ala	Ala	Ala	Thr	Glu	Thr	Pro	Val	Leu
		115					120					125			
Ser	Leu	Leu	Arg	Arg	Glu	Ala	Arg	Ala	Pro	Leu	Gly	Ala	Pro	Asn	Pro
		130				135					140				
Phe	His	Leu	Gln	Leu	His	Trp	Ala	Ser	Pro	Leu	Glu	Thr	Leu	Leu	Asp
145				150						155				160	
Val	Leu	Val	Ala	Val	Leu	Gln	Ala	His	Ala	Trp	Glu	Asp	Val	Gly	Leu
			165						170					175	
Ala	Leu	Cys	Arg	Thr	Gln	Asp	Pro	Gly	Gly	Leu	Val	Ala	Leu	Trp	Thr
			180					185					190		
Ser	Arg	Ala	Gly	Arg	Pro	Pro	Gln	Leu	Val	Leu	Asp	Leu	Ser	Arg	Arg
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Asp	Thr	Gly	Asp	Ala	Gly	Leu	Arg	Ala	Arg	Leu	Ala	Pro	Met	Ala	Ala
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Asp	Ile	Ala	Arg	Ala	Arg	Arg	Val	Leu	Glu	Ala	Val	Pro	Pro	Gly	Pro
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His	Trp	Leu	Leu	Gly	Thr	Pro	Leu	Pro	Pro	Lys	Ala	Leu	Pro	Thr	Ala
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Gly	Leu	Pro	Pro	Gly	Leu	Leu	Ala	Leu	Gly	Glu	Val	Ala	Arg	Pro	Pro
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Leu	Glu	Ala	Ala	Ile	His	Asp	Ile	Val	Gln	Leu	Val	Ala	Arg	Ala	Leu



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<210> 4515  
 <211> 3207  
 <212> DNA  
 <213> Homo sapiens

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Leu Thr Pro Ala Asp Lys Ala Ala Ile Arg Lys Glu Leu Asn Glu Phe
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Lys Ser Ser Glu Met Glu Val His Glu Glu Ser Lys His Phe Thr Arg
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Tyr His Arg Pro

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<210> 4513  
 <211> 545  
 <212> DNA  
 <213> Homo sapiens

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<210> 4514  
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 <212> PRT  
 <213> Homo sapiens

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Ser Met Ser His Leu Leu Lys Gly Asn Ser Glu Glu Lys Ser Leu Met
    35              40              45
Ile Met Lys Met Ile Ser Ala Thr Glu Gly Pro Val Lys Ala Arg Glu
    50              55              60
Val Gln Lys Phe Thr Glu Asp Leu Val Gly Ser Val Val His Val Leu
    65              70              75              80
Ser His Arg Gln Glu Leu Arg Gly Trp Thr Gly Lys Glu Ala Pro Gly
    85              90              95
Pro Asn Pro Arg Val Gln Val Leu Thr Ala Gln Leu Leu Ser Asp Met

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<210> 4512

<211> 244

<212> PRT

<213> Homo sapiens

<400> 4512

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Glu	Glu	Met	Thr	Pro	Thr	Ser	Val	Ile	Pro	Lys	Leu	Pro	Gln	Cys	Leu
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Arg	Glu	Glu	Glu	Glu	Lys	Glu	Ser	Asp	Ser	Asp	Ser	Glu	Gly	Pro	Ile
	50				55				60						
Gln	Tyr	Arg	Asp	Glu	Glu	Asp	Glu	Asp	Glu	Ser	Tyr	Gln	Ser	Ala	Leu
65				70				75						80	
Ala	Asn	Lys	Val	Lys	Arg	Lys	Asp	Thr	Leu	Ala	Met	Lys	Leu	Asn	His
			85					90					95		
Arg	Pro	Ser	Glu	Pro	Glu	Leu	Asn	Leu	Asn	Ser	Trp	Pro	Cys	Lys	Ser
		100					105						110		
Lys	Glu	Glu	Trp	Asn	Glu	Ile	Arg	His	Gln	Ile	Gly	Asn	Thr	Leu	Ile
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Arg	Arg	Leu	Ser	Gln	Arg	Pro	Thr	Pro	Glu	Glu	Leu	Glu	Gln	Arg	Asn
	130					135					140				
Ile	Leu	Gln	Pro	Lys	Asn	Glu	Ala	Asp	Arg	Gln	Ala	Glu	Lys	Arg	Glu
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Ile	Lys	Arg	Arg	Leu	Thr	Arg	Lys	Leu	Ser	Gln	Arg	Pro	Thr	Val	Ala
			165					170						175	
Glu	Leu	Leu	Ala	Arg	Lys	Ile	Leu	Arg	Phe	Asn	Glu	Tyr	Val	Glu	Val
		180					185						190		
Thr	Asp	Ala	Gln	Asp	Tyr	Asp	Arg	Arg	Ala	Asp	Lys	Pro	Trp	Thr	Lys

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                     3125                      3130                      3135  
 Leu Ser Glu Gly Gly Pro Pro Leu Arg Ile Ala Gln Arg Met Arg Leu  
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 Glu Ala Thr Gln Leu Glu Gly Val Ala Arg Arg Met Thr Leu Ala Ser  
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 Ala Ser Val Glu Thr Asp Tyr Cys Leu Leu Leu Ala Leu Pro Cys Gly  
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 Arg Asp Gln Glu Asp Val Val Ser Gln Thr Glu Ser Leu Lys Ala Ala  
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 Phe Ile Thr Tyr Leu Gln Ala Lys Gln Ala Ala Gly Ile Ile Asn Val  
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 Pro Asn Pro Gly Ser Asn Gln Pro Ala Tyr Val Leu Gln Ile Phe Pro  
                     3220                      3225                      3230  
 Pro Cys Glu Phe Ser Glu Ser His Leu Ser Arg Leu Ala Pro Asp Leu  
                     3235                      3240                      3245  
 Leu Ala Ser Ile Ser Asn Ile Ser Pro His Leu Met Ile Val Ile Ala  
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 Ser Val  
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&lt;210&gt; 4511

&lt;211&gt; 1375

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 4511

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Ile Thr Tyr Ser Ile Arg Pro Glu Ala Leu His Ser Pro Arg Ala Pro		
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Leu Gln Pro Gln Gln Ile Glu Val Arg Ala Pro Gln Arg Ala Ser Thr		
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Pro Val Gln Ser Glu Val Leu Val Met Gln Ser Glu Tyr Arg Leu His		
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Pro Tyr Thr Val Pro Arg Asp Val Arg Ile Met Val His Pro His Val		
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Pro Pro Ala Ser Lys Ala Pro Gln Gln Pro Gly Lys Glu Ala Ala Lys		
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Thr Pro Asp Ala Lys Ala Ala Pro Thr Pro Thr Pro Ala Pro Val Pro		
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Val Pro Val Pro Leu Pro Ala Pro Ala Pro Ala Pro His Gly Glu Ala		
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2865	2870	2875
Thr Pro Pro Val Val Val Thr His Gly Val Gln Ile Val His Ser Ser		
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Pro Pro Ala Gln Leu Thr His Thr Gln Phe Pro Ala Ala Ser Ser Val		
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Gly Leu Pro Ser Arg Thr Lys Thr Ala Ala Gln Gly Pro Pro Pro Glu		
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Gly Glu Pro Leu Gln Pro Pro Gln Pro Val Gln Ser Thr Gln Pro Ala		
2945	2950	2955
Gln Pro Ala Pro Pro Cys Pro Pro Ser Gln Leu Gly Gln Pro Gly Gln		
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Pro Pro Ser Ser Lys Met Pro Gln Val Ser Gln Glu Ala Lys Gly Thr		
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Pro Thr Ser Phe Pro Ser Pro Val Ser Val Ser Met Lys Pro Asp Leu		
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Pro Val Ser Leu Pro Thr Gln Thr Ala Pro Lys Gln Pro Leu Phe Val		
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Pro Thr Thr Ser Gly Pro Ser Thr Pro Pro Gly Leu Val Leu Pro His		
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Thr Glu Phe Gln Pro Ala Pro Lys Gln Asp Ser Ser Pro His Leu Thr		
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Ser Gln Arg Pro Val Asp Met Val Gln Leu Leu Lys Lys Tyr Pro Ile		

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 Val Leu Lys Gly Pro Val Asn Val Leu Thr Gly Pro Val Asn Val Leu  
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&lt;210&gt; 4509

&lt;211&gt; 11680

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 4509

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&lt;210&gt; 4508

&lt;211&gt; 172

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 4508

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&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 4506

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Arg Arg Gln Trp Trp Leu Trp Leu Ser Ser Leu Ser Asn Gln Ile His
      35             40             45
Pro Thr Pro Ser Ala Gln Gly Gln Ala Ala Leu Arg Gln Thr Cys Pro
      50             55             60
His Leu Arg Glu Ser Gly Pro Leu Ser Val Arg His Val Ala Leu Leu
65             70             75             80
Ala Leu Glu Thr Ala Ser His Pro Ser Gly Pro His Thr Asn Gln Ala
      85             90             95
Pro Ser Pro Ala Thr Ser Pro Lys Cys Pro Ser Glu Pro Ala Thr Pro
      100            105            110
Ser Ser Thr Asp Ser Leu Ile Lys Ile
      115            120

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&lt;210&gt; 4507

&lt;211&gt; 3664

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 4507

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 Lys Lys Asp Asn Val Ala Gly Val Thr Leu Pro Val Phe Glu His Tyr  
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 Tyr Val Ile Ile Pro Arg Ile Glu Arg Thr Leu Ala Tyr Ile Ile Thr  
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&lt;210&gt; 4505

&lt;211&gt; 379

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 4505

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&lt;210&gt; 4506

&lt;211&gt; 121



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 gtg  
 1983

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&lt;211&gt; 250

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

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&lt;211&gt; 267

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 4502

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Phe	Asp	Glu	Thr	Ile	Val	Asp	Glu	Asn	Ser	Asp	Asp	Ser	Ile	Val	Arg
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Ala	Ala	Pro	Gly	Gln	Arg	Leu	Pro	Glu	Ser	Leu	Arg	Ala	Thr	Tyr	Arg
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Ser Leu Cys Gly Asp Trp Leu Gln Gly Leu His Arg Phe Val Ala Arg  
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 Ser Phe Cys His Glu Arg Leu Gly Gln Pro Ala Trp Ala Leu Ala Asp  
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 Ala Gln Val Ala Leu Thr Leu Arg Pro Gly Trp Pro Arg Gly Leu Phe  
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 Arg Leu Gly Lys Ala Leu Met Gly Leu Gln Arg Phe Arg Glu Ala Ala  
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 Ala Val Phe Gln Glu Thr Leu Arg Gly Gly Ser Gln Pro Asp Ala Ala  
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&lt;210&gt; 4499

&lt;211&gt; 562

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 4499

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 Cys Ser Cys Leu Ala Pro Phe Ser Gly Asn Lys Cys Gln Lys Val Gln  
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&lt;213&gt; Homo sapiens

&lt;400&gt; 4494

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&lt;211&gt; 3623

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 4495

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&lt;211&gt; 111

&lt;212&gt; PRT

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&lt;213&gt; Homo sapiens

&lt;400&gt; 4492

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 2390

&lt;210&gt; 4490

&lt;211&gt; 383

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 4490

Xaa Ile Gln Ile Val Gly Leu Thr Glu Leu Gln Ser Leu Ala Val Gly  
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 Pro Arg Val Phe Gln Tyr Gly Val Lys Val Val Leu Gln Ala Met Tyr  
 20 25 30  
 Leu Leu Trp Lys Leu Met Trp Arg Glu Pro Gly Ala Tyr Ile Phe Leu  
 35 40 45  
 Gln Asn Pro Pro Gly Leu Pro Ser Ile Ala Val Cys Trp Phe Val Gly  
 50 55 60  
 Cys Leu Cys Gly Ser Lys Leu Val Ile Asp Trp His Asn Tyr Gly Tyr  
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 Ser Ile Met Gly Leu Val His Gly Pro Asn His Pro Leu Val Leu Leu  
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 Ala Lys Trp Tyr Glu Lys Phe Phe Gly Arg Leu Ser His Leu Asn Leu

<210> 4489  
<211> 2390  
<212> DNA  
<213> Homo sapiens

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1380

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Pro Gln Ala Val Pro His Leu Ile Pro Lys Val Ser Ser Asn Glu Val
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Asp Ser Phe Lys Tyr Trp Trp Phe Trp Leu Ala Arg Val Ser Glu Gly
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<210> 4487  
 <211> 387  
 <212> DNA  
 <213> Homo sapiens

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<210> 4488  
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 <212> PRT  
 <213> Homo sapiens

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<400> 4488
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Gln Ser Gln Pro Ile Leu Phe Gly Gln Met Ala Gln Lys Pro Leu Arg
      20           25           30
Leu Leu Ala Cys Gly Asp Val Glu Gly Lys Phe Asp Ile Leu Phe Asn
      35           40           45
Arg Val Gln Ala Ile Gln Lys Lys Ser Gly Asn Phe Asp Leu Leu Leu
      50           55           60
Cys Val Gly Asn Phe Phe Gly Ser Thr Gln Asp Ala Glu Trp Glu Glu
      65           70           75           80
Tyr Lys Thr Gly Ile Lys Lys Ala Pro Ile Gln Thr Tyr Val Leu Gly
      85           90           95
Ala Asn Asn Gln Glu Thr Val Lys Tyr Phe Gln Asp Ala Asp Gly Cys
      100           105           110
Glu Leu Ala Glu Asn Ile Thr Tyr Leu Gly Arg Lys Gly Ile Phe Thr
      115           120           125
Gly

```

```

          325          330          335
Glu Pro Pro Val His Ser Ser Ala Gln Ile Val Ser Lys His Leu Val
          340          345          350
Gly Val Asp Ser Leu Ile Gly Pro Glu Thr Gln Ile Gly Glu Lys Ser
          355          360          365
Ser Ile Lys Arg Ser Val Ile Gly Ser Ser Cys Leu Ile Lys Asp Arg
          370          375          380
Val Thr Ile Thr Asn Cys Leu Leu Met Asn Ser Val Thr Val Glu Glu
385          390          395          400
Gly Ser Asn Ile Gln Gly Ser Val Ile Cys Asn Asn Ala Val Ile Glu
          405          410          415
Lys Gly Ala Asp Ile Lys Asp Cys Leu Ile Gly Ser Gly Gln Arg Ile
          420          425          430
Glu Ala Lys Ala Lys Arg Val Asn Glu Val Ile Val Gly Asn Asp Gln
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Leu Met Glu Ile
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<210> 4485  
 <211> 513  
 <212> DNA  
 <213> Homo sapiens

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<400> 4485
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<210> 4486  
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 <212> PRT  
 <213> Homo sapiens

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<400> 4486
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          20          25          30
Ser Ile Ser Leu Pro Ser Gly Ala Pro Gly Gly Gln Gly Asp Leu Leu

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<210> 4484

<211> 452

<212> PRT

<213> Homo sapiens

<400> 4484

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 35 40 45  
 Glu Glu Val Ile Val Val Thr Thr Arg Asp Val Gln Lys Ala Leu Cys  
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 Ala Glu Phe Lys Met Lys Met Lys Pro Asp Ile Val Cys Ile Pro Asp  
 65 70 75 80  
 Asp Ala Asp Met Gly Thr Ala Asp Ser Leu Arg Tyr Ile Tyr Pro Lys  
 85 90 95  
 Leu Lys Thr Asp Val Leu Val Leu Ser Cys Asp Leu Ile Thr Asp Val  
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 Ala Leu His Glu Val Val Asp Leu Phe Arg Ala Tyr Asp Ala Ser Leu  
 115 120 125  
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 130 135 140  
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 145 150 155 160  
 Asp Ser Thr Gly Lys Arg Leu Leu Phe Met Ala Asn Glu Ala Asp Leu  
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 Asp Glu Glu Leu Val Ile Lys Gly Ser Ile Leu Gln Lys His Pro Arg  
 180 185 190  
 Ile Arg Phe His Thr Gly Leu Val Asp Ala His Leu Tyr Cys Leu Lys  
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 Lys Tyr Ile Val Asp Phe Leu Met Glu Asn Gly Ser Ile Thr Ser Ile  
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 225 230 235 240  
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 260 265 270  
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 275 280 285  
 Arg Trp Glu Asp Leu Ser Arg Ser Gln Val Arg Cys Tyr Val His Ile  
 290 295 300  
 Met Lys Glu Gly Leu Cys Ser Arg Val Ser Thr Leu Gly Leu Tyr Met  
 305 310 315 320  
 Glu Ala Asn Arg Gln Val Pro Lys Leu Leu Ser Ala Leu Cys Pro Glu

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<210> 4481  
 <211> 320  
 <212> DNA  
 <213> Homo sapiens

<400> 4481  
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 <211> 101  
 <212> PRT  
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<400> 4482  
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 20                      25                      30  
 Cys Pro Pro Thr Trp Gly Gly Asp Pro Gly Leu Gly Phe Val Gly Ala  
 35                      40                      45  
 Ser Arg Thr Pro Asp Phe Trp Gly Val Pro Asp Ser Arg Gly Gly Pro  
 50                      55                      60  
 Arg Ala Gly Leu Gly His Val Gln Ser Leu Ile Asp Leu Cys Pro Phe  
 65                      70                      75                      80  
 Leu Pro Leu Pro Leu Cys Ala Ser Leu Asp Ser Pro Arg Glu Phe Ser  
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<210> 4483  
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<211> 308

<212> PRT

<213> Homo sapiens

<400> 4480

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			20					25					30		
Asp	Tyr	Gly	Glu	Pro	Glu	Arg	Gly	Gly	Gly	Pro	Arg	Ala	Ala	Gln	Gly
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Glu	Met	Ser	Ser	Thr	Ser	Ser	Lys	Arg	Ala	Pro	Thr	Thr	Ala	Thr	Gln
	50					55					60				
Arg	Leu	Lys	Gln	Asp	Tyr	Leu	Arg	Ile	Lys	Lys	Asp	Pro	Val	Pro	Tyr
65				70					75					80	
Ile	Cys	Ala	Glu	Pro	Leu	Pro	Ser	Asn	Ile	Leu	Glu	Trp	His	Tyr	Val
			85					90					95		
Val	Arg	Gly	Pro	Glu	Met	Thr	Pro	Tyr	Glu	Gly	Gly	Tyr	Tyr	His	Gly
			100					105					110		
Lys	Leu	Ile	Phe	Pro	Arg	Glu	Phe	Pro	Phe	Lys	Pro	Pro	Ser	Ile	Tyr
		115				120						125			
Met	Ile	Thr	Pro	Asn	Gly	Arg	Phe	Lys	Cys	Asn	Thr	Arg	Leu	Cys	Leu
	130					135					140				
Ser	Ile	Thr	Asp	Phe	His	Pro	Asp	Thr	Trp	Asn	Pro	Ala	Trp	Ser	Val
145				150					155					160	
Ser	Thr	Ile	Leu	Thr	Gly	Leu	Leu	Ser	Phe	Met	Val	Glu	Lys	Gly	Pro
			165					170					175		
Thr	Leu	Gly	Ser	Ile	Glu	Thr	Ser	Asp	Phe	Thr	Lys	Arg	Gln	Leu	Ala
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		195				200					205				
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<210> 4478  
 <211> 118  
 <212> PRT  
 <213> Homo sapiens

<400> 4478  
 Met Trp Lys Arg Gly Glu Val Gly Lys Ile Lys Glu Cys Leu Glu Gly  
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 Lys Thr Glu Tyr Gln Glu Ser Glu Phe Leu Ser Pro Ala Tyr Ser Asp  
 20 25 30  
 Lys Pro Leu Gly Leu Cys Glu Asn Ala Asp Val Leu Asp Arg Arg Leu  
 35 40 45  
 Trp Glu Gly Asn Met Lys Glu Asn Asn Asn Glu Ser Lys Ser Thr  
 50 55 60  
 Ser Ile Pro Gly His Phe Ile His Phe Gln Asp Tyr Cys Ala Pro Ile  
 65 70 75 80  
 Ser Thr Leu Met Val Cys Val Asp Thr Ala Gln Gly Cys Ile Ser Leu  
 85 90 95  
 Arg Cys His Thr Phe Pro Leu Val Ser Ser Asp Ile Met Pro Gln Phe  
 100 105 110  
 Leu Gln Ser His Ile Lys  
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<210> 4479  
 <211> 2158  
 <212> DNA  
 <213> Homo sapiens

<400> 4479  
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 475

<210> 4476  
 <211> 106  
 <212> PRT  
 <213> Homo sapiens

<400> 4476  
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 Ser Arg Arg Ser Ser Ser Ser Gln Pro Leu Pro Gln Ser Ala Arg Thr  
 35 40 45  
 Gly His Thr Glu Gly Ser Val Ala Leu His Gly Ser Pro Ala Ser Arg  
 50 55 60  
 Gln Thr Ser Gln Arg Trp Thr Val Cys Gln Gly Trp Asp Trp Asn Ser  
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 Arg Arg Ser Leu Asp Thr Ser Gly Ile Arg Glu Thr Ser Leu Gly Arg  
 85 90 95  
 Tyr Pro Leu Pro Ser Ser Arg Val His Ala  
 100 105

<210> 4477  
 <211> 1153  
 <212> DNA  
 <213> Homo sapiens

<400> 4477  
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 120  
 taggccaggg cagatgggat atgacgaatg gactgccagc tggatacaag gatgctcacc  
 180  
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 240  
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 540  
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 600  
 ccaattcttc cctatatttc ctggaccagc taaagtccag tgtttccaga gacttttgaa  
 660

35 40 45  
 Trp Arg Asp Glu Arg Leu Asp Leu Gln Trp Ser Leu Glu Gly His Gln  
 50 55 60  
 Leu Gly Val Val Ser Val Asp Ile Ser His Thr Leu Pro Ile Ala Ala  
 65 70 75 80  
 Ser Ser Ser Leu Asp Ala His Ile Arg Leu Trp Asp Leu Glu Asn Gly  
 85 90 95  
 Lys Gln Met Lys Ser Ile Asp Ala Gly Pro Val Asp Ala Trp Thr Leu  
 100 105 110  
 Ala Phe Ser Pro Asp Ser Gln His Leu Ala Thr Gly Thr His Met Gly  
 115 120 125  
 Lys Val Asn Ile Phe Gly Val Glu Ser Gly Lys Lys Glu Tyr Ser Leu  
 130 135 140  
 Asp Thr Arg Gly Lys Phe Ile Leu Ser Ile Ala Tyr Ser Pro Asp Gly  
 145 150 155 160  
 Lys Tyr Leu Ala Ser Gly Ala Ile Asp Gly Ile Ile Asn Ile Phe Asp  
 165 170 175  
 Ile Ala Thr Gly Lys Leu Leu His Thr Leu Glu Gly His Ala Met Pro  
 180 185 190  
 Ile Arg Ser Leu Thr Phe Ser Pro Asp Ser Gln Leu Leu Val Thr Ala  
 195 200 205  
 Ser Asp Asp Gly Tyr Ile Lys Ile Tyr Asp Val Gln His Ala Asn Leu  
 210 215 220  
 Ala Gly Thr Leu Ser Gly His Ala Ser Trp Val Leu Asn Val Ala Phe  
 225 230 235 240  
 Cys Pro Asp Asp Thr His Phe Val Ser Ser Ser Ser Asp Lys Ser Val  
 245 250 255  
 Lys Val Trp Asp Val Gly Thr Arg Thr Cys Val His Thr Phe Phe Asp  
 260 265 270  
 His Gln Asp Gln Val Trp Gly Val Lys Tyr Asn Gly Asn Gly Ser Lys  
 275 280 285  
 Ile Val Ser Val Gly Asp Asp Gln Glu Ile His Ile Tyr Asp Cys Pro  
 290 295 300  
 Ile  
 305

&lt;210&gt; 4475

&lt;211&gt; 475

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 4475

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 240  
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 ctttaggggg taggcacatc cctgtttgag ccttgccccg acagcctcgt caatgccag  
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 180  
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 240  
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 720  
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 960  
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 1080  
 gagaatgtac ggattgatca tgacattcct taccttctta ggcttggtta aaagaaatat  
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 1200  
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 1255

&lt;210&gt; 4474

&lt;211&gt; 305

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 4474

Met	Thr	Asn	Gln	Tyr	Gly	Ile	Leu	Phe	Lys	Gln	Glu	Gln	Ala	His	Asp
1					5				10					15	
Asp	Ala	Ile	Trp	Ser	Val	Ala	Trp	Gly	Thr	Asn	Lys	Lys	Glu	Asn	Ser
				20				25					30		
Glu	Thr	Val	Val	Thr	Gly	Ser	Leu	Asp	Asp	Leu	Val	Lys	Val	Trp	Lys

acagccctcc cccaacccca ggccagtcag gcacaatccc cccaccccc aaacgtcctg  
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 1320  
 cctgcaacca gacagtctac aactgcccc tccagcccat tttctgccgt gaaaccccag  
 1380  
 ccagccacac cagactctgg aacccttttt cgactgcccc aactcttgga caccaggcca  
 1440  
 actagaacac ccaacaccaa actgtacaga ctctcccacc ccaacctccc cagactctgc  
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 1620  
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 1680  
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 1740  
 aaaagaaaaa aaagtcgacg cggccggaat t  
 1771

&lt;210&gt; 4472

&lt;211&gt; 160

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 4472

Met	Glu	Ile	Pro	Val	Pro	Val	Gln	Pro	Ser	Trp	Leu	Arg	Arg	Ala	Ser
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Ala	Pro	Leu	Pro	Gly	Leu	Ser	Ala	Pro	Gly	Arg	Leu	Phe	Asp	Gln	Arg
			20					25					30		
Phe	Gly	Glu	Gly	Leu	Leu	Glu	Ala	Glu	Leu	Ala	Ala	Leu	Cys	Pro	Thr
		35					40					45			
Thr	Leu	Ala	Pro	Tyr	Tyr	Leu	Arg	Ala	Pro	Ser	Val	Ala	Leu	Pro	Val
		50				55					60				
Ala	Gln	Val	Pro	Thr	Asp	Pro	Gly	His	Phe	Ser	Val	Leu	Leu	Asp	Val
65					70					75				80	
Lys	His	Phe	Ser	Pro	Glu	Glu	Ile	Ala	Val	Lys	Val	Val	Gly	Glu	His
			85						90					95	
Val	Glu	Val	His	Ala	Arg	His	Glu	Glu	Arg	Pro	Asp	Glu	His	Gly	Phe
			100					105					110		
Val	Ala	Arg	Glu	Phe	His	Arg	Arg	Tyr	Arg	Leu	Pro	Pro	Gly	Val	Asp
		115				120					125				
Pro	Ala	Ala	Val	Thr	Ser	Ala	Leu	Ser	Pro	Glu	Gly	Val	Leu	Ser	Ile
		130				135					140				
Gln	Ala	Ala	Pro	Ala	Ser	Ala	Gln	Ala	Pro	Pro	Pro	Ala	Ala	Ala	Lys
145					150					155				160	

&lt;210&gt; 4473

&lt;211&gt; 1255

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 4473



1	5	10	15
Ala Ser Trp	Val Leu Asn Val	Ala Phe Cys Pro Asp Asp	Thr His Phe
	20	25	30
Val Ser Arg	Ser Gln Cys Trp	Ser Gly Leu Gly Trp	Pro Arg Gln Leu
	35	40	45
Glu Ser Arg	Arg Trp Thr Thr		
	50	55	

&lt;210&gt; 4471

&lt;211&gt; 1771

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 4471

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240
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1080
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1200

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&lt;213&gt; Homo sapiens

&lt;400&gt; 4468

Xaa Asp Val Pro Lys Val Glu Val Leu Glu Arg Glu Leu Ala Trp Leu  
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 Lys Glu His Leu Ser Gln Leu Glu Ser Pro Val Val Phe Cys His Asn  
 20 25 30  
 Asp Leu Leu Cys Lys Asn Ile Ile Tyr Asp Ser Ile Lys Gly His Val  
 35 40 45  
 Arg Phe Ile Asp Tyr Glu Tyr Ala Gly Tyr Asn Tyr Gln Ala Phe Asp  
 50 55 60  
 Ile Gly Asn His Phe Asn Glu Phe Ala Gly Val Asn Glu Val Asp Tyr  
 65 70 75 80  
 Cys Leu Tyr Pro Ala Arg Glu Thr Gln Leu Gln Trp Leu His Tyr Tyr  
 85 90 95  
 Leu Gln Ala Gln Lys Gly Met Ala Val Thr Pro Arg Glu Val Gln Arg  
 100 105 110  
 Leu Tyr Val Gln Val Asn Lys Phe Ala Leu Ala Ser His Phe Phe Trp  
 115 120 125  
 Ala Leu Trp Ala Leu Ile Gln Asn Gln Tyr Ser Thr Ile Asp Phe Asp  
 130 135 140  
 Phe Leu Arg Tyr Ala Val Ile Arg Phe Asn Gln Tyr Phe Lys Val Lys  
 145 150 155 160  
 Pro Gln Ala Ser Ala Leu Glu Met Pro Lys  
 165 170

&lt;210&gt; 4469

&lt;211&gt; 409

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 4469

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 180  
 gtgctttaga ggctcctgc gagccttggc tttgaagctt taacaggcct ccctcccatc  
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 tggaaatagg tagctgtgtc tgagactcct ggagaacaat taatatgagg gccaggcaga  
 300  
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 360  
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 409

&lt;210&gt; 4470

&lt;211&gt; 55

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 4470

Ile Tyr Asp Ala Gln His Ala Asn Leu Ala Gly Thr Leu Ser Gly His

65                      70                      75                      80  
Glu Lys Phe Tyr Ser Met Ala Ala Arg Ser Ser Tyr Ser  
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<210> 4467
<211> 1142
<212> DNA
<213> Homo sapiens
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120
tatgacagca tcaaagggtca cgtgcggttc attgactatg aatatgctgg ctacaactac
180
caagcttttg acattggcaa ccatttcaat gagtttgcag gcgtgaatga ggtggattac
240
tgcctgtacc cggcgcggtga gaccagctg cagtggctgc actactacct gcaggcacia
300
aaggggatgg ccgtgacccc caggaggtg caaaggctct acgtgcaagt caacaagttt
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420
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720
ttccgggggt ccccttcacc ccaccaggct tgggaggaag tgcctgcagc caggtcctga
780
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900
ctacctcag tgcctgagc ctccagtcg tctccccctg catgccccat gtgggaggtg
960
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1020
ggtggggggc aagaattgag catgacatct tccccagcag ccacctctc tgagatccct
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1140
gt
1142

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<210> 4468
<211> 170
<212> PRT
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 420  
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 960  
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 1020  
 tacgtgaaga gcatgaaggg tctcgcggga atccgggacg ccatgtggga gttacttacc  
 1080  
 agtgagtcca ccaatcacag ctgggatgtg ctatgtaccc gcnttctgga gaagccgctc  
 1140  
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 1200  
 gaaggctttg actccatctc cagtagtncc aaggagctct tggtttcang tttgcaggaa  
 1260  
 cttgaaagca gcaccagcaa ctcccacttc a  
 1291

&lt;210&gt; 4466

&lt;211&gt; 93

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 4466

Gly	Leu	Glu	Arg	Gln	Val	Arg	Ala	Glu	Ile	Glu	His	Lys	Lys	Glu	Glu
1				5				10						15	
Leu	Arg	Gln	Met	Val	Gly	Glu	Arg	Tyr	Arg	Asp	Leu	Ile	Glu	Ala	Xaa
		20						25					30		
Asp	Thr	Ile	Gly	Gln	Met	Arg	Arg	Xaa	Ala	Val	Gly	Leu	Val	Asp	Ala
		35					40					45			
Val	Lys	Ala	Thr	Asp	Gln	Tyr	Cys	Ala	Arg	Leu	Arg	Gln	Ala	Gly	Ser
	50					55					60				
Ala	Ala	Pro	Arg	Pro	Pro	Arg	Ala	Gln	Gln	Pro	Gln	Gln	Pro	Ser	Gln

195 200 205  
 Arg Ala Arg Arg Pro His Asn Ala Ile Phe Val Asn Phe Glu Asp Glu  
 210 215 220  
 Glu Val Pro Lys Gln Pro Leu Glu Ala Ala Ala Gln Thr Trp Arg Arg  
 225 230 235 240  
 Val Cys Thr Asn Pro Val Asp Arg Lys Val Glu Glu Glu Leu Arg Lys  
 245 250 255  
 Leu Phe Asp Ile Arg Pro Ile Trp Ser Arg Asn Ala Val Lys Ala Asn  
 260 265 270  
 Ile Ser Val His Pro Asp Lys Leu Lys Val Leu Leu Pro Phe Ile Ala  
 275 280 285  
 Tyr Tyr Met Ile Thr Gly Pro Trp Arg Ser Leu Trp Ile Arg Phe Gly  
 290 295 300  
 Tyr Asp Pro Arg Lys Asn Pro Asp Ala Lys Ile Tyr Gln Val Leu Asp  
 305 310 315 320  
 Phe Arg Ile Arg Cys Gly Met Lys His Gly Tyr Ala Pro Ser Asp Leu  
 325 330 335  
 Pro Val Lys Ala Lys Arg Ser Thr Tyr Asn Tyr Ser Leu Pro Ile Thr  
 340 345 350  
 Val Lys Lys Thr Ser Ser Gln Leu Val Thr Met His Asp Leu Lys Gln  
 355 360 365  
 Gly Leu Gly Arg Ser Gly Thr Ser Gly Ala Arg Lys Pro Ala Ser Ser  
 370 375 380  
 Lys Tyr Lys Leu Lys Asp Ser Val Tyr Ile Phe Arg Glu Gly Ala Leu  
 385 390 395 400  
 Pro Pro Tyr Arg Gln Met Phe Tyr Gln Leu Cys Asp Leu Asn Val Glu  
 405 410 415  
 Glu Leu Gln Lys Ile Ile His Arg Asn Asp Gly Ala Glu Asn Ser Cys  
 420 425 430  
 Thr Glu Arg Asp Gly Trp Cys Leu Pro Lys Thr Ser Asp Glu Leu Arg  
 435 440 445  
 Asp Thr Met Ser Leu Met Ile Arg Gln Thr Ile Arg Ser Lys Arg Pro  
 450 455 460  
 Ala Leu Phe Ser Ser Ser Ala Lys Ala Asp Gly Gly Lys Glu Gln Leu  
 465 470 475 480  
 Thr Tyr Glu Ser Gly Glu Asp Glu Glu Asp Glu Glu Glu Glu Glu  
 485 490 495  
 Glu Glu Glu Asp Phe Lys Pro Ser Asp Gly Ser Glu Asn Glu Met Glu  
 500 505 510  
 Thr Glu Ile Leu Asp Tyr Val  
 515

&lt;210&gt; 4465

&lt;211&gt; 1291

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 4465

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60

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<210> 4464

<211> 519

<212> PRT

<213> Homo sapiens

<400> 4464

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Gly	Val	Leu	Gly	Thr	Glu	Ala	His	Ser	Glu	Val	Thr	Phe	Asp	Met	Glu
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Asp	Ala	Pro	Val	Asp	Tyr	Phe	Tyr	Arg	Pro	Glu	Thr	Gln	His	Arg	Glu
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Gly	Tyr	Asn	Asn	Pro	Pro	Ile	Ser	Gly	Glu	Asn	Leu	Ile	Gly	Leu	Ser

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 <211> 96  
 <212> PRT  
 <213> Homo sapiens

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 Ser Ser Asn Lys Glu Asn Phe Ile Tyr Leu Ala Asp Phe Pro Lys Glu  
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 Leu Ser Ile Lys Tyr Met Ala Arg Ser Phe Arg Gly Ala Val Ala Ile  
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&lt;210&gt; 4460

&lt;211&gt; 121

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 4460

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Gly	Lys	Glu	Arg	Ala	Ala	Pro	Ser	Gln	Gly	Ser	Pro	Arg	Cys	Cys	Pro	35	40	45	
Leu	Ser	Pro	Gly	Ser	Ala	Arg	Gly	Ala	Arg	Gly	Glu	Asn	Gln	Pro	Arg	50	55	60	
Ser	Arg	Gly	Arg	Ala	Ala	Asn	Gly	Arg	Ala	Pro	Pro	Gly	Pro	Leu	Thr	65	70	75	80
Arg	Arg	Leu	Ala	Gly	Arg	Ala	Arg	Thr	Pro	Arg	Pro	Lys	Trp	Leu	Phe	85	90	95	
Gln	Gly	Ala	Ser	Gln	Ala	Gly	Glu	Leu	Gly	Lys	Gln	Arg	Arg	Met	Pro	100	105	110	
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&lt;210&gt; 4461

&lt;211&gt; 488

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 4461

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 195 200 205  
 Gly Val Val Leu Ala Asp Pro Gly Cys Ile Glu Ala Ser Val Lys Gln  
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 Glu Val Leu Ile Asn Arg Asn Ser Val Leu Phe Ser Ile Thr Leu Lys  
 225 230 235 240  
 Asp Lys Lys Leu Cys Tyr Asp Gln Gly Ile Ser Gly His His Leu Met  
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 260 265 270  
 Lys Arg Leu Ala Phe Asp Ile Thr Tyr Thr Leu Glu Tyr Ser Arg Leu  
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 Lys Asn Lys His Tyr Phe Asp Cys Val Asn Val Asn Pro Glu Met Pro  
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&lt;210&gt; 4459

&lt;211&gt; 1114

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 4459

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&lt;210&gt; 4458

&lt;211&gt; 405

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 4458

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			20					25					30		
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Val	Met	Arg	Leu	Arg	Ser	Leu	Pro	Ser	Pro	Gln	Arg	Tyr	Thr	Arg	Gln
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Glu	Arg	Tyr	Arg	Ala	Arg	Pro	Pro	Arg	Val	Leu	Glu	Arg	Ser	Gly	Phe
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Arg	Val	Glu	Pro	Glu	Gly	Arg	Gly	Glu	Gly	Tyr	Gln	Asn	Leu	Gly	Ala

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Lys	Gln	Gln	Ser	Glu	Asp	Asp	Val	Arg	Arg	Leu	Phe	Glu	Ala	Phe	Gly
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Asn	Ile	Glu	Glu	Cys	Thr	Ile	Leu	Arg	Gly	Pro	Asp	Gly	Asn	Ser	Lys
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Gly	Cys	Ala	Phe	Val	Lys	Tyr	Ser	Ser	His	Ala	Glu	Ala	Gln	Ala	Ala
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Ile	Asn	Ala	Leu	His	Gly	Ser	Gln	Thr	Met	Pro	Gly	Ala	Ser	Ser	Ser
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Leu	Val	Val	Lys	Phe	Ala	Asp	Thr	Asp	Lys	Glu	Arg	Thr	Met	Arg	Arg
			180						185						190
Met	Gln	Gln	Met	Ala	Gly	Gln	Met	Gly	Met	Phe	Asn	Pro	Met	Ala	Ile
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Ala	Ala	Phe	Ala	Ala	Ala	Gln	Met	Gln	Gln	Met	Ala	Ala	Leu	Asn	Met
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Asn	Gly	Leu	Ala	Ala											
			260												

&lt;210&gt; 4457

&lt;211&gt; 1491

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 4457

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&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 4455

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&lt;210&gt; 4456

&lt;211&gt; 261

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 4456

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		20						25				30			
Ile	Tyr	Glu	Leu	Thr	Val	Leu	Lys	Asp	Arg	Phe	Thr	Gly	Met	His	Lys
		35					40					45			
Gly	Cys	Ala	Phe	Leu	Thr	Tyr	Cys	Glu	Arg	Glu	Ser	Ala	Leu	Lys	Ala
	50						55				60				
Gln	Ser	Ala	Leu	His	Glu	Gln	Lys	Thr	Leu	Pro	Gly	Met	Asn	Arg	Pro
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Ile	Gln	Val	Lys	Pro	Ala	Asp	Ser	Glu	Ser	Arg	Gly	Asp	Ser	Ser	Cys
			85					90					95		
Leu	Arg	Gln	Pro	Pro	Ser	His	Arg	Lys	Leu	Phe	Val	Gly	Met	Leu	Asn

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<210> 4454  
 <211> 207  
 <212> PRT  
 <213> Homo sapiens

<400> 4454  
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 Gln Lys Trp Ala Ala Gly Ala Lys Ala Tyr Leu Asn Lys Gly Ser Lys  
 35 40 45  
 Gly Pro Leu Ser Leu Gly Ser Ser Ile Gln Pro Leu Ser Gln Gln Arg  
 50 55 60  
 Gln Asp Cys Gly Pro Leu Cys Phe Leu Asn Arg Ala Gln Gly Ser Gln  
 65 70 75 80  
 Gly Met Pro Ser Leu Gln His Ser Thr Leu Trp Ser Gln Trp Ser Arg  
 85 90 95  
 Arg Ser Ser Leu Lys Tyr Tyr Tyr Arg Gly Glu Arg Pro Ile Leu Ala  
 100 105 110  
 Met Leu Leu Tyr Leu Pro Arg Pro Lys Thr Val Leu Cys Ser Phe Ser  
 115 120 125  
 Cys Ser Glu Ile Arg Ser Gln Asn Ser Arg Arg His Ser Phe Gly Lys  
 130 135 140  
 Lys Gly His Ala Phe Val Leu Tyr Leu Ile Leu Val Ser Glu Ala Leu  
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 Ile Pro Val Asp Cys Gly Leu Arg Trp Ser Pro Pro Gln Asp Pro Gln  
 165 170 175  
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<210> 4455  
 <211> 882

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Lys Tyr Asn Phe Tyr Leu Pro Phe Phe Phe Gly Pro Ile Met Thr
      35           40           45
Phe Asp Arg Phe His Ala Gln Val Ser Gln Val Glu Pro Val Arg Arg
      50           55           60
Glu Gly Glu Leu Trp His Ile Arg Ala Gln Ala Gly Leu Ser Val Val
      65           70           75           80
Ala Ile Met Ala Val Asp Ile Phe Phe His Phe Phe Tyr Ile Leu Thr
      85           90           95
Ile Pro Ser Asp Leu Lys Phe Ala Asn Arg Leu Pro Asp Ser Ala Leu
      100          105          110
Ala Gly Leu Ala Tyr Ser Asn Leu Val Tyr Asp Trp Val Lys Ala Ala
      115          120          125
Val Leu Phe Gly Val Val Asn Thr Val Ala Cys Leu Asp His Leu Asp
      130          135          140
Pro Pro Gln Pro Pro Lys Cys Ile Thr Ala Leu Tyr Val Phe Ala Glu
      145          150          155          160
Thr His Phe Asp Arg Gly Ile Asn Asp Trp Leu Cys Lys Tyr Val Tyr
      165          170          175
Asn His Ile Gly Gly Glu His Ser Ala Val Ile Pro Glu Leu Ala Ala
      180          185          190
Thr Val Ala Thr Phe Ala Ile Thr Thr Leu Trp Leu Gly Pro Cys Asp
      195          200          205
Ile Val Tyr Leu Trp Ser Phe Leu Asn Cys Phe Gly Leu Asn Phe Glu
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Leu Trp Met Gln Lys Leu Ala Glu Trp Gly Pro Leu Ala Arg Ile Glu
      225          230          235          240
Ala Ser Leu Ser Val Gln Met Ser Arg Arg Val Arg Ala Leu Phe Gly
      245          250          255
Ala Met Asn Phe Trp Ala Ile Ile Met Tyr Asn Leu Val Ser Leu Asn
      260          265          270
Ser Leu Lys Phe Thr Glu Leu Val Ala Arg Arg Leu Leu Leu Thr Gly
      275          280          285
Phe Pro Gln Thr Thr Leu Ser Ile Leu Phe Val Thr Tyr Cys Gly Val
      290          295          300
Gln Leu Val Lys Glu Arg Glu Arg Thr Leu Ala Leu Glu Glu Glu Gln
      305          310          315          320
Lys Gln Asp Lys Glu Lys Pro Glu
      325

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&lt;210&gt; 4453

&lt;211&gt; 685

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 4453

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180

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&lt;210&gt; 4452

&lt;211&gt; 328

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 4452

Met Gly Ala Ala Ala Ser Gln Cys Cys Val Ala Pro Ala Leu His Trp



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<210> 4450  
 <211> 194  
 <212> PRT  
 <213> Homo sapiens

<400> 4450  
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 Gly Pro Gln Asn Arg Tyr Ala Leu Ile Cys Gln Gln Cys Phe Ser His  
 35 40 45  
 Asn Gly Met Ala Leu Lys Glu Glu Phe Glu Tyr Ile Ala Phe Arg Cys  
 50 55 60  
 Ala Tyr Cys Phe Phe Leu Asn Pro Ala Arg Lys Thr Arg Pro Gln Ala  
 65 70 75 80  
 Pro Arg Leu Pro Glu Phe Ser Phe Glu Lys Arg Gln Val Val Glu Gly  
 85 90 95  
 Ser Ser Ser Val Gly Pro Leu Pro Ser Gly Ser Val Leu Ser Ser Asp  
 100 105 110  
 Asn Gln Phe Asn Glu Glu Ser Leu Glu His Asp Val Leu Asp Asp Asn  
 115 120 125  
 Thr Glu Gln Thr Asp Asp Lys Ile Pro Ala Thr Glu Gln Thr Asn Gln  
 130 135 140  
 Val Ile Glu Lys Ala Ser Asp Ser Glu Glu Pro Glu Glu Lys Gln Glu  
 145 150 155 160  
 Thr Glu Asn Glu Glu Ala Ser Val Ile Glu Thr Asn Ser Thr Val Pro  
 165 170 175  
 Gly Ala Asp Ser Ile Pro Asp Pro Glu Leu Ser Gly Glu Ser Leu Thr  
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 Ala Glu

<210> 4451  
 <211> 1637  
 <212> DNA  
 <213> Homo sapiens

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 gaggccttcc ctgcccagtc cccacaggac ctcacctagg gtggaggaga gcaacagcaa  
 180  
 gctcctggag tcagagagga agctgcagga ggagcgacac cgcaccgtgg tcttggagca  
 240  
 acatctggag aagatacgcc tggagccagg gaaggcatca gcctcccaga gacgagctcc  
 300

225		230		235		240									
Val	Thr	Ala	Phe	Trp	Arg	Ser	Leu	Leu	Ala	Cys	Cys	Gln	Leu	Pro	Ser
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Arg	Pro	Gly	Ile	His	Leu	Cys									
			260												

<210> 4449  
 <211> 1365  
 <212> DNA  
 <213> Homo sapiens

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 180  
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 tcttctgat gaatttacag caagacttgc catgacactc ccattttttg cttttccatt  
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 420  
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 840  
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 1200  
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 1260

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&lt;210&gt; 4448

&lt;211&gt; 263

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 4448

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 20 25 30  
 Asp Arg Gly Pro Trp Arg Val Gly Val Val Gly Tyr Gly Arg Leu Gly  
 35 40 45  
 Gln Ser Leu Val Ser Arg Leu Leu Ala Gln Gly Ser Glu Leu Gly Leu  
 50 55 60  
 Glu Leu Val Phe Val Trp Asn Arg Asp Pro Gly Arg Met Ala Gly Ser  
 65 70 75 80  
 Val Pro Pro Ala Leu Gln Leu Glu Asp Leu Thr Thr Leu Glu Glu Arg  
 85 90 95  
 His Pro Asp Leu Val Val Glu Val Ala His Pro Lys Ile Ile His Glu  
 100 105 110  
 Ser Gly Val Gln Ile Leu Arg His Ala Asn Leu Leu Ser Leu Arg Val  
 115 120 125  
 Thr Met Ala Thr His Pro Asp Gly Phe Arg Leu Glu Gly Pro Leu Ala  
 130 135 140  
 Ala Ala His Ser Pro Gly Pro Cys Thr Val Leu Tyr Glu Gly Pro Val  
 145 150 155 160  
 Arg Gly Leu Cys Pro Phe Ala Pro Arg Asn Ser Asn Thr Met Ala Ala  
 165 170 175  
 Ala Ala Leu Ala Ala Pro Ser Leu Gly Phe Asp Gly Val Ile Gly Val  
 180 185 190  
 Leu Val Ala Asp Thr Ser Leu Thr Asp Met His Val Val Asp Val Glu  
 195 200 205  
 Leu Ser Gly Pro Arg Gly Pro Thr Gly Arg Ser Phe Ala Val His Thr  
 210 215 220  
 Arg Arg Glu Asn Pro Ala Glu Pro Gly Ala Val Thr Gly Ser Ala Thr

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<210> 4446

<211> 140

<212> PRT

<213> Homo sapiens

<400> 4446

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		20						25					30		
Pro	Gln	Glu	Cys	Pro	Asp	Pro	His	Ser	Tyr	Pro	Gly	Pro	Arg	Ser	Pro
		35					40					45			
Thr	Pro	Gly	Leu	Pro	Ser	Ser	Ala	Val	Asn	Asp	Asp	Leu	Leu	Leu	Leu
		50				55					60				
Pro	Ser	Ser	Leu	Pro	Ser	Val	Thr	Lys	Gly	Leu	Pro	Arg	Cys	Gln	Leu
					70					75				80	
Trp	Asn	Glu	Gly	Cys	Pro	Trp	Glu	Val	Met	Ile	Leu	Arg	Tyr	Thr	Gly
				85					90					95	
Ala	Gln	Gln	Ile	Ala	Ser	Ser	Tyr	Pro	Gln	Thr	Val	Phe	Ala	Cys	Met
			100					105					110		
Gln	Pro	Leu	Ala	Leu	Pro	Leu	Cys	Gly	Arg	Lys	Pro	Ala	Gln	Gly	His
		115					120					125			
Thr	Ala	Gly	Gln	Gln	Gln	His	Ser	Trp	Ser	Gln	Ile				
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<210> 4447

<211> 951

<212> DNA

<213> Homo sapiens

<400> 4447

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 180  
 gaactgggccc tagaacttgt ttttgtgtgg aaccgtgacc ctggacgaat ggcagggagt  
 240  
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 300  
 gtggtagaag tggcccatcc aaaaataatc catgaatctg gggtagaaat cctccgtcat  
 360  
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 420

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692

<210> 4444  
<211> 108  
<212> PRT  
<213> Homo sapiens

<400> 4444  
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Cys Glu Ala Ser Cys Lys Leu Asp Ser Leu Pro Ser Ala Pro Ser Pro  
35 40 45  
Lys Ala Gly Leu Gln Glu Val Arg Pro Ala Leu Gln Ala Thr Pro Val  
50 55 60  
Leu Gly Leu Leu Leu Ser Ser Ser Phe Leu Arg Val Thr Glu Pro Gly  
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Arg Glu Val Gly Cys Gly Leu Pro Cys Pro Tyr Ser His Leu Leu Gln  
85 90 95  
Leu Pro Pro Cys Trp Thr His Gln Gln Gln Ser Lys  
100 105

<210> 4445  
<211> 901  
<212> DNA  
<213> Homo sapiens

<400> 4445  
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 355 360 365  
 Gly Ser Glu Tyr Ile Met Ala Leu Thr Thr Gly Lys His Glu Gly Tyr  
 370 375 380  
 Val His Phe Gly Thr Ile Arg Val Thr Thr Cys Ser Ile Ile Trp Ser  
 385 390 395 400  
 Glu Tyr Ile Ala Gly Glu Tyr Thr Leu Leu Leu Val Glu Ser Gly  
 405 410 415  
 Tyr Gly Asn Ala Ser Lys Arg Phe Gln Val Val Ser Tyr Asn Thr Ala  
 420 425 430  
 Ser Asp Asp Leu Glu Leu Leu Tyr His Ile Pro Glu Phe Ile Pro Glu  
 435 440 445  
 Ala Arg Gly Leu Glu Phe Leu Met Ile Leu Gly Thr Glu Ser Tyr Thr  
 450 455 460  
 Ser Thr Ala Met Ala Pro Lys Gly Ile Phe Cys Asn Pro Tyr Asn Asn  
 465 470 475 480  
 Leu Ile Phe Ile Trp Gly Asn Phe Leu Leu Gln Arg Ser Gly Thr Ser  
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 500 505 510  
 Arg Cys Thr Ser Ala  
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&lt;210&gt; 4443

&lt;211&gt; 692

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 4443

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<210> 4442  
 <211> 517  
 <212> PRT  
 <213> Homo sapiens

<400> 4442  
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 Trp Arg Leu Trp Ala Ile Lys Asp Phe Gln Glu Cys Thr Trp Gln Val  
 50 55 60  
 Val Leu Asn Glu Phe Lys Arg Val Gly Glu Ser Gly Val Ser Asp Ser  
 65 70 75 80  
 Phe Phe Glu Gln Glu Pro Val Asp Thr Val Ser Ser Leu Phe His Met  
 85 90 95  
 Leu Val Asp Ser Pro Ile Asp Pro Ser Glu Lys Tyr Leu Gly Phe Pro  
 100 105 110  
 Tyr Tyr Leu Lys Ile Asn Tyr Ser Cys Glu Glu Lys Pro Ser Glu Asp  
 115 120 125  
 Leu Val Arg Met Gly His Leu Thr Gly Leu Lys Pro Leu Val Leu Val  
 130 135 140  
 Thr Phe Gln Ser Pro Val Asn Phe Tyr Arg Trp Lys Ile Glu Gln Leu  
 145 150 155 160  
 Gln Ile Gln Met Glu Ala Ala Pro Phe Arg Ser Lys Gly Gly Pro Gly  
 165 170 175  
 Gly Gly Gly Arg Asp Arg Asn Leu Ala Gly Met Asn Ile Asn Gly Phe  
 180 185 190  
 Leu Lys Arg Asp Arg Asp Asn Asn Ile Gln Phe Thr Val Gly Glu Glu  
 195 200 205  
 Leu Phe Asn Leu Met Pro Gln Tyr Phe Val Gly Val Ser Ser Arg Pro  
 210 215 220  
 Leu Trp His Thr Val Asp Gln Ser Pro Val Leu Ile Leu Gly Gly Ile  
 225 230 235 240  
 Pro Asn Glu Lys Tyr Val Leu Met Thr Asp Thr Ser Phe Lys Asp Phe  
 245 250 255  
 Ser Leu Val Glu Val Asn Gly Val Gly Gln Met Leu Ser Ile Asp Ser  
 260 265 270  
 Cys Trp Val Gly Ser Phe Tyr Cys Pro His Ser Gly Phe Thr Ala Thr  
 275 280 285  
 Ile Tyr Asp Thr Ile Ala Thr Glu Ser Thr Leu Phe Ile Arg Gln Asn  
 290 295 300  
 Gln Leu Val Tyr Tyr Phe Thr Gly Thr Tyr Thr Leu Tyr Glu Arg  
 305 310 315 320  
 Asn Arg Gly Ser Gly Glu Cys Ala Val Ala Gly Pro Thr Pro Gly Glu

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&lt;210&gt; 4440

&lt;211&gt; 82

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 4440

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Leu	Arg	Phe	Ala	Phe	Ile	Asp	Val	Gly	Ile	Phe	Arg	Asn	Ser	Ala	Pro
		20						25				30			
Arg	Leu	Ser	Met	Ile	Gly	Ala	Asp	Ser	Ser	Glu	Glu	Lys	Phe	Leu	Arg
		35					40					45			
Arg	Ile	Gly	Arg	Phe	Gly	Tyr	Gly	Tyr	Gly	Pro	Tyr	Gln	Pro	Val	Pro
	50					55				60					
Glu	Gln	Pro	Leu	Tyr	Pro	Gln	Pro	Tyr	Gln	Pro	Gln	Tyr	Gln	Gln	Tyr
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&lt;210&gt; 4441

&lt;211&gt; 2055

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 4441

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<210> 4438

<211> 206

<212> PRT

<213> Homo sapiens

<400> 4438

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Lys	Arg	Asp	Val	Val	Lys	Thr	Ile	Arg	Glu	Val	Gln	Pro	Asp	Val	Val
			20					25					30		
Val	Val	Glu	Leu	Cys	Gln	Tyr	Arg	Val	Ser	Met	Leu	Lys	Met	Asp	Glu
		35				40					45				
Ser	Thr	Leu	Leu	Arg	Glu	Ala	Gln	Glu	Leu	Ser	Leu	Glu	Lys	Leu	Gln
	50					55				60					
Gln	Ala	Val	Arg	Gln	Asn	Gly	Leu	Met	Ser	Gly	Leu	Met	Gln	Met	Leu
65				70					75					80	
Leu	Leu	Lys	Val	Ser	Ala	His	Ile	Thr	Glu	Gln	Leu	Gly	Met	Ala	Pro
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Gly	Gly	Glu	Phe	Arg	Glu	Ala	Phe	Lys	Glu	Ala	Ser	Lys	Val	Pro	Phe
			100				105					110			
Cys	Lys	Phe	His	Leu	Gly	Asp	Arg	Pro	Ile	Pro	Val	Thr	Phe	Lys	Arg
		115				120					125				
Ala	Ile	Ala	Ala	Leu	Ser	Phe	Trp	Gln	Lys	Val	Arg	Leu	Ala	Trp	Gly
	130					135				140					
Leu	Cys	Phe	Leu	Ser	Asp	Pro	Ile	Ser	Lys	Asp	Asp	Val	Glu	Arg	Cys
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Lys	Gln	Lys	Asp	Leu	Leu	Glu	Gln	Met	Met	Ala	Glu	Met	Ile	Gly	Glu
			165				170					175			
Phe	Pro	Asp	Leu	His	Arg	Thr	Ile	Val	Ser	Glu	Arg	Asp	Val	Tyr	Leu
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<211> 2121

<212> DNA

<213> Homo sapiens

<400> 4439

<211> 261  
 <212> PRT  
 <213> Homo sapiens

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 Asp Glu Glu Asp Met Phe Met Val Val Asp Leu Leu Leu Gly Gly Asp  
 35 40 45  
 Leu Arg Tyr His Leu Gln Gln Asn Val His Phe Thr Glu Gly Thr Val  
 50 55 60  
 Lys Leu Tyr Ile Cys Glu Leu Ala Leu Ala Leu Glu Tyr Leu Gln Arg  
 65 70 75 80  
 Tyr His Ile Ile His Arg Asp Ile Lys Pro Asp Asn Ile Leu Leu Asp  
 85 90 95  
 Glu His Gly His Val His Ile Thr Asp Phe Asn Ile Ala Thr Val Val  
 100 105 110  
 Lys Gly Ala Glu Arg Ala Ser Ser Met Ala Gly Thr Lys Pro Tyr Met  
 115 120 125  
 Ala Pro Glu Val Phe Gln Val Tyr Met Asp Arg Gly Pro Gly Tyr Ser  
 130 135 140  
 Tyr Pro Val Asp Trp Trp Ser Leu Gly Ile Thr Ala Tyr Glu Leu Leu  
 145 150 155 160  
 Arg Gly Trp Arg Pro Tyr Glu Ile His Ser Val Thr Pro Ile Asp Glu  
 165 170 175  
 Ile Leu Asn Met Phe Lys Val Glu Arg Val His Tyr Ser Ser Thr Trp  
 180 185 190  
 Cys Lys Gly Met Val Ala Leu Leu Arg Lys Leu Leu Thr Lys Asp Pro  
 195 200 205  
 Glu Ser Arg Val Ser Ser Leu His Asp Ile Gln Ser Val Pro Tyr Leu  
 210 215 220  
 Ala Asp Met Asn Trp Asp Ala Val Phe Lys Lys Ala Leu Met Pro Gly  
 225 230 235 240  
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<210> 4437  
 <211> 620  
 <212> DNA  
 <213> Homo sapiens

<400> 4437  
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20 25 30  
 Phe Ser Ser Ser Asp Leu Ala Asp Leu Arg Phe Leu Asp Met Ser Gln  
 35 40 45  
 Asn Gln Phe Gln Tyr Leu Pro Asp Gly Phe Leu Arg Lys Met Pro Ser  
 50 55 60  
 Leu Ser His Leu Asn Leu His Gln Asn Cys Leu Met Thr Leu His Ile  
 65 70 75 80  
 Arg Glu His Glu Pro Pro Gly Ala Leu Thr Glu Leu Asp Leu Ser His  
 85 90 95  
 Asn Gln Leu Ser Glu Leu His Leu Ala Pro Gly Leu Ala Ser Cys Leu  
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 Gly Ser Leu Arg Leu Phe Asn Leu Ser Ser Asn Gln Leu Leu Gly Val  
 115 120 125  
 Pro Pro Gly Leu Phe Ala Asn Ala Arg Asn Ile Thr Thr Leu Asp Met  
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 Ser His Asn Gln Ile  
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&lt;210&gt; 4435

&lt;211&gt; 783

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 4435

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 783

&lt;210&gt; 4436

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<210> 4432

<211> 57

<212> PRT

<213> Homo sapiens

<400> 4432

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Cys	Lys	Phe	His	Leu	Gly	Asp	Arg	Pro	Ile	Pro	Val	Thr	Phe	Lys	Arg
		20				25					30				
Ala	Ile	Ala	Ala	Leu	Ser	Phe	Trp	Gln	Lys	Val	Arg	Leu	Ala	Trp	Gly
	35					40					45				
Leu	Cys	Phe	Leu	Ser	Asp	Pro	Ile	Arg							
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<210> 4433

<211> 447

<212> DNA

<213> Homo sapiens

<400> 4433

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<210> 4434

<211> 149

<212> PRT

<213> Homo sapiens

<400> 4434

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Val	Asp	Gly	Asn	Val	Thr	Asn	Ile	Thr	Thr	Val	Ser	Leu	Trp	Glu	Glu

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<210> 4430

<211> 151

<212> PRT

<213> Homo sapiens

<400> 4430

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Leu	Arg	Arg	Val	Met	Pro	Ile	Asn	Gly	Thr	Pro	Ile	Gly	Arg	Leu	Arg
	20						25						30		
Ser	Ala	Leu	Pro	Gln	Val	Asn	Thr	Arg	Arg	Glu	Ser	Leu	Asn	Arg	Gln
	35					40						45			
Ala	Pro	Gln	Pro	Arg	Arg	Lys	Pro	Ser	Phe	Gln	Thr	Val	Gly	Ile	Pro
	50					55					60				
Phe	Ile	Pro	Trp	His	Arg	Glu	Pro	Lys	Gly	Met	Gln	Thr	Asp	Pro	Gly
65				70				75						80	
Arg	Ala	Leu	His	Ser	Gln	Thr	Leu	Ala	Arg	Thr	Arg	Arg	Leu	Gly	Ala
				85				90						95	
Pro	Arg	Arg	Ala	Leu	Pro	Pro	Arg	Pro	Pro	Pro	Pro	Ala	Asp	Ser	Pro
			100					105					110		
Leu	Cys	Glu	Leu	Asn	His	Leu	Gly	Ala	Met	Cys	Arg	Gly	Arg	Ala	Ser
	115					120						125			
Ala	Ser	Glu	Val	Leu	Gly	Gly	Pro	Val	Thr	Ala	Ser	Arg	Phe	Tyr	Gly
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<210> 4431

<211> 507

<212> DNA

<213> Homo sapiens

<400> 4431

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 cccaaacaaa cgtgctgtgg tccctgcccg gtgtccacag tgccagcccc accctcccag  
 360

595 600 605  
 Glu Arg Phe Gly Gly Gly Asn Pro Glu Leu Leu Thr Gln Met Val Ser  
 610 615 620  
 Lys Gly Phe Leu Gly Arg Lys Ser Gly Lys Gly Phe Tyr Ile Tyr Gln  
 625 630 635 640  
 Glu Gly Val Lys Arg Lys Asp Leu Asn Ser Asp Met Asp Ser Ile Leu  
 645 650 655  
 Ala Ser Leu Lys Leu Pro Pro Lys Ser Glu Val Ser Ser Asp Glu Asp  
 660 665 670  
 Ile Gln Phe Arg Leu Val Thr Arg Phe Val Asn Glu Ala Val Met Cys  
 675 680 685  
 Leu Gln Glu Gly Ile Leu Ala Thr Pro Ala Glu Gly Asp Ile Gly Ala  
 690 695 700  
 Val Phe Gly Leu Gly Phe Pro Pro Cys Leu Gly Gly Pro Phe Arg Phe  
 705 710 715 720  
 Val Asp Leu Tyr Gly Ala Gln Lys Ile Val Asp Arg Leu Lys Lys Tyr  
 725 730 735  
 Glu Ala Ala Tyr Gly Lys Gln Phe Thr Pro Cys Gln Leu Leu Ala Asp  
 740 745 750  
 His Ala Asn Ser Pro Asn Lys Lys Phe Tyr Gln  
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&lt;210&gt; 4429

&lt;211&gt; 981

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 4429

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 720  
 ccgccagcgt catcaaccag gccctgtcca tgctgaggt cagcatcgc cacaccaacg  
 780



Gly Ala Leu Pro Gly Ala Gly Gly Thr Gln Arg Leu Pro Lys Met Val  
 165 170 175  
 180 185 190  
 Gly Val Pro Ala Ala Leu Asp Met Met Leu Thr Gly Arg Ser Ile Arg  
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 Ala Asp Arg Ala Lys Lys Met Gly Leu Val Asp Gln Leu Val Glu Pro  
 210 215 220  
 Leu Gly Pro Gly Leu Lys Pro Pro Glu Glu Arg Thr Ile Glu Tyr Leu  
 225 230 235 240  
 Glu Glu Val Ala Ile Thr Phe Ala Lys Gly Leu Ala Asp Lys Lys Ile  
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 Ser Pro Lys Arg Asp Lys Gly Leu Val Glu Lys Leu Thr Ala Tyr Ala  
 260 265 270  
 Met Thr Ile Pro Phe Val Arg Gln Gln Val Tyr Lys Lys Val Glu Glu  
 275 280 285  
 Lys Val Arg Lys Gln Thr Lys Gly Leu Tyr Pro Ala Pro Leu Lys Ile  
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 Ile Asp Val Val Lys Thr Gly Ile Glu Gln Gly Ser Asp Ala Gly Tyr  
 305 310 315 320  
 Leu Cys Glu Ser Gln Lys Phe Gly Glu Leu Val Met Thr Lys Glu Ser  
 325 330 335  
 Lys Ala Leu Met Gly Leu Tyr His Gly Gln Val Leu Cys Lys Lys Asn  
 340 345 350  
 Lys Phe Gly Ala Pro Gln Lys Asp Val Lys His Leu Ala Ile Leu Gly  
 355 360 365  
 Ala Gly Leu Met Gly Ala Gly Ile Ala Gln Val Ser Val Asp Lys Gly  
 370 375 380  
 Leu Lys Thr Ile Leu Lys Asp Ala Thr Leu Thr Ala Leu Asp Arg Gly  
 385 390 395 400  
 Gln Gln Gln Val Phe Lys Gly Leu Asn Asp Lys Val Lys Lys Lys Ala  
 405 410 415  
 Leu Thr Ser Phe Glu Arg Asp Ser Ile Phe Ser Asn Leu Thr Gly Gln  
 420 425 430  
 Leu Asp Tyr Gln Gly Phe Glu Lys Ala Asp Met Val Ile Glu Ala Val  
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 Phe Glu Asp Leu Ser Leu Lys His Arg Val Leu Lys Glu Val Glu Ala  
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 Val Ile Pro Asp His Cys Ile Phe Ala Ser Asn Thr Ser Ala Leu Pro  
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 Met His Tyr Phe Ser Pro Val Asp Lys Met Gln Leu Leu Glu Ile Ile  
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 Thr Thr Glu Lys Thr Ser Lys Asp Thr Ser Ala Ser Ala Val Ala Val  
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 Gly Leu Lys Gln Gly Lys Val Ile Ile Val Val Lys Asp Gly Pro Gly  
 530 535 540  
 Phe Tyr Thr Thr Arg Cys Leu Ala Pro Met Met Ser Glu Val Ile Arg  
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 Ile Leu Gln Glu Gly Val Asp Pro Lys Lys Leu Asp Ser Leu Thr Thr  
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 580 585 590  
 Val Asp Val Ala Lys His Val Ala Glu Asp Leu Gly Lys Val Phe Gly

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&lt;210&gt; 4428

&lt;211&gt; 763

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 4428

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 Arg Ile Leu Arg Ser Arg Gly Tyr Ile Cys Arg Asn Phe Thr Gly Ser  
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 Ser Ala Leu Leu Thr Arg Thr His Ile Asn Tyr Gly Val Lys Gly Asp  
 35 40 45  
 Val Ala Val Val Arg Ile Asn Ser Pro Asn Ser Lys Val Asn Thr Leu  
 50 55 60  
 Ser Lys Glu Leu His Ser Glu Phe Ser Glu Val Met Asn Glu Ile Trp  
 65 70 75 80  
 Ala Ser Asp Gln Ile Arg Ser Ala Val Leu Ile Ser Ser Lys Pro Gly  
 85 90 95  
 Cys Phe Ile Ala Gly Ala Asp Ile Asn Met Leu Ala Ala Cys Lys Thr  
 100 105 110  
 Leu Gln Glu Val Thr Gln Leu Ser Gln Glu Ala Gln Arg Ile Val Glu  
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 Lys Leu Glu Lys Ser Thr Lys Pro Ile Val Ala Ala Ile Asn Gly Ser  
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 Cys Leu Gly Gly Gly Leu Glu Val Ala Ile Ser Cys Gln Tyr Arg Ile  
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 Ala Thr Lys Asp Arg Lys Thr Val Leu Gly Thr Pro Glu Val Leu Leu

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2100

865                      870                      875                      880  
 Gln Tyr Lys Glu Ile Leu Thr Pro Ser Trp Arg Glu Val Asp Leu Gln  
                                  885                      890                      895  
 Ser Leu Lys Gly Ser Pro Asp Glu Glu Asn Glu Glu Ile Glu Asp Leu  
                                  900                      905                      910  
 Ser Asp Ala Ala Phe Ala Ala Leu His Ala Lys Cys Glu Glu Met Glu  
                                  915                      920                      925  
 Arg Ala Arg Trp Leu Trp Thr Thr Ser Val Pro Pro Gln Arg Arg Gly  
                                  930                      935                      940  
 Ser Arg Ser Tyr Arg Ser Ser Asp Gly Arg Thr Thr Pro Gln Leu Gly  
 945                                   950                      955                      960  
 Ser Ala Asn Pro Ser Thr Pro Gln Pro Ala Ser Pro Asp Val Ser Ser  
                                  965                      970                      975  
 Ser His Ser Leu Ser Glu Tyr Ser His Gly Gln Ser Pro Arg Ser Pro  
                                  980                      985                      990  
 Ile Ser Pro Glu Leu His Ser Ala Pro Leu Thr Pro Val Ala Arg Asp  
                                  995                      1000                      1005  
 Thr Leu Arg His Leu Ala Ser Glu Asp Thr Arg Cys Ser Thr Pro Glu  
                                  1010                      1015                      1020  
 Leu Gly Leu Asp Glu Gln Ser Val Gln Pro Trp Glu Arg Arg Thr Phe  
 1025                                   1030                      1035                      1040  
 Pro Leu Ala His Ser Pro Gln Ala Glu Cys Glu Asp Gln Leu Asp Ala  
                                  1045                      1050                      1055  
 Gln Glu Arg Ala Ala Arg Cys Thr Arg Arg Thr Ser Gly Ser Lys Thr  
                                  1060                      1065                      1070  
 Xaa Pro Gly Asp Arg Gly Ser Ala His Leu Ala Ser His Cys Pro Pro  
                                  1075                      1080                      1085  
 Gln Glu Ser Ala Ser Gly Gly Ser Ser His Ser Ser Ala Pro Asp Ser  
                                  1090                      1095                      1100  
 Gln Met Ser Gly Arg Gln Pro Ser Lys Gln Thr His  
 1105                                   1110                      1115

&lt;210&gt; 4427

&lt;211&gt; 4474

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 4427

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435 440 445  
 Trp Asn Trp Leu Gln Ala His Val Ser Asp Leu Glu Tyr Arg Ile Arg  
 450 455 460  
 Gln Gln Thr Asp Ile Tyr Lys Gln Ile Arg Ala Asn Lys Gly Leu Ile  
 465 470 475 480  
 Val Leu Gly Glu Val Pro Pro Pro Glu His Thr Thr Asp Leu Phe Leu  
 485 490 495  
 Pro Leu Ser Ser Glu Val Lys Thr Asp His Gly Thr Asp Lys Leu Ile  
 500 505 510  
 Glu Ser Val Ser Gln Pro Leu Glu Asn His Gly Ala Pro Ile Ile Gly  
 515 520 525  
 His Ile Ser Glu Ser Leu Ser Thr Lys Ser Cys Gly Ala Leu Arg Pro  
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 Val Asn Gly Val Ile Asn Thr Leu Gln Pro Val Leu Ala Asp His Ile  
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 Pro Gly Asp Ser Ser Asp Ala Glu Glu Gln Leu His Lys Lys Gln Arg  
 565 570 575  
 Leu Asn Leu Val Ser Ser Ser Ser Asp Gly Thr Cys Val Ala Ala Arg  
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 Thr Arg Pro Val Leu Ser Cys Lys Lys Arg Arg Leu Val Arg Pro Asn  
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 Ser Ile Val Pro Leu Ser Lys Lys Val His Arg Asn Ser Thr Ile Arg  
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 Pro Gly Cys Asp Val Asn Pro Ser Cys Ala Leu Cys Gly Ser Gly Ser  
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 Ile Asn Thr Met Pro Pro Glu Ile His Tyr Glu Ala Pro Leu Leu Glu  
 645 650 655  
 Arg Leu Ser Gln Leu Asp Ser Cys Val His Pro Val Leu Ala Phe Pro  
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 Asp Asp Val Pro Thr Ser Leu His Phe Gln Ser Met Leu Lys Ser Gln  
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 Trp Gln Asn Lys Pro Phe Asp Lys Ile Lys Pro Pro Lys Lys Leu Ser  
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 705 710 715 720  
 Lys Asp Arg His Lys Leu Val Ser Ser Phe Leu Thr Thr Ala Lys Leu  
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 Ser His His Gln Thr Arg Pro Asp Arg Thr His Arg Gln His Leu Asp  
 740 745 750  
 Asp Val Gly Ala Val Pro Met Val Glu Arg Val Thr Ala Pro Lys Ala  
 755 760 765  
 Glu Arg Leu Leu Asn Pro Pro Pro Val His Asp Pro Asn His Ser  
 770 775 780  
 Lys Met Arg Leu Arg Asp His Ser Ser Glu Arg Ser Glu Val Leu Lys  
 785 790 795 800  
 His His Thr Asp Met Ser Ser Ser Ser Tyr Leu Ala Ala Thr His His  
 805 810 815  
 Pro Pro His Ser Pro Leu Val Arg Gln Leu Ser Thr Ser Ser Asp Ser  
 820 825 830  
 Pro Ala Pro Ala Ser Ser Ser Ser Gln Val Thr Ala Ser Thr Ser Gln  
 835 840 845  
 Gln Pro Val Arg Arg Arg Arg Gly Glu Ser Ser Phe Asp Ile Asn Asn  
 850 855 860  
 Ile Val Ile Pro Met Ser Val Ala Ala Thr Thr Arg Val Glu Lys Leu

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His Ile Arg Phe Lys Leu Ala Pro Pro Ser Ser Thr Leu Ser Pro Gly			
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Ser Ala Glu Asn Asn Gly Asn Ala Asn Ile Leu Ile Ala Ala Asn Gly			
35	40	45	
Thr Lys Arg Lys Ala Ile Ala Ala Glu Asp Pro Ser Leu Asp Phe Arg			
50	55	60	
Asn Asn Pro Thr Lys Glu Asp Leu Gly Lys Leu Gln Pro Leu Val Ala			
65	70	75	80
Ser Tyr Leu Cys Ser Asp Val Thr Ser Val Pro Ser Lys Glu Ser Leu			
85	90	95	
Lys Leu Gln Gly Val Phe Ser Lys Gln Thr Val Leu Lys Ser His Pro			
100	105	110	
Leu Leu Ser Gln Ser Tyr Glu Leu Arg Ala Glu Leu Leu Gly Arg Gln			
115	120	125	
Pro Val Leu Glu Phe Ser Leu Glu Asn Leu Arg Thr Met Asn Thr Ser			
130	135	140	
Gly Gln Thr Ala Leu Pro Gln Ala Pro Val Asn Gly Leu Ala Lys Lys			
145	150	155	160
Leu Thr Lys Ser Ser Thr His Ser Asp His Asp Asn Ser Thr Ser Leu			
165	170	175	
Asn Gly Gly Lys Arg Ala Leu Thr Ser Ser Ala Leu His Gly Gly Glu			
180	185	190	
Met Gly Gly Ser Glu Ser Gly Asp Leu Lys Gly Gly Met Thr Asn Cys			
195	200	205	
Thr Leu Pro His Arg Ser Leu Asp Val Glu His Thr Thr Leu Tyr Ser			
210	215	220	
Asn Asn Ser Thr Ala Asn Lys Ser Phe Val Asn Ser Met Glu Gln Pro			
225	230	235	240
Ala Leu Gln Gly Ser Ser Arg Leu Ser Pro Gly Thr Asp Ser Ser Ser			
245	250	255	
Asn Leu Gly Gly Val Lys Leu Glu Gly Lys Lys Ser Pro Leu Ser Ser			
260	265	270	
Ile Leu Phe Ser Ala Leu Asp Ser Asp Thr Arg Ile Thr Ala Leu Leu			
275	280	285	
Arg Arg Gln Ala Asp Ile Glu Ser Arg Ala Arg Arg Leu Gln Lys Arg			
290	295	300	
Leu Gln Val Val Gln Ala Lys Gln Val Glu Arg His Ile Gln His Gln			
305	310	315	320
Leu Gly Gly Phe Leu Glu Lys Thr Leu Ser Lys Leu Pro Asn Leu Glu			
325	330	335	
Ser Leu Arg Pro Arg Ser Gln Leu Met Leu Thr Arg Lys Ala Glu Ala			
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Ala Leu Arg Lys Ala Ala Ser Glu Thr Thr Thr Ser Glu Gly Leu Ser			
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Asn Phe Leu Lys Ser Asn Ser Ile Ser Glu Glu Leu Glu Arg Phe Thr			
370	375	380	
Ala Ser Gly Ile Ala Asn Leu Arg Cys Ser Glu Gln Ala Phe Asp Ser			
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Asp Val Thr Asp Ser Ser Ser Gly Gly Glu Ser Asp Ile Glu Glu Glu			
405	410	415	
Glu Leu Thr Arg Ala Asp Pro Glu Gln Arg His Val Pro Leu Arg Arg			
420	425	430	
Arg Ser Glu Trp Lys Trp Ala Ala Asp Arg Ala Ala Ile Val Ser Arg			

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5199

&lt;210&gt; 4426

&lt;211&gt; 1116

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 4426

Met Ala Ala Met Ala Pro Ala Leu Thr Asp Ala Ala Ala Glu Ala His



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Thr	Ala	Lys	Arg	Leu	Leu	Glu	Lys	Gly	Lys	Glu	Ala	Val	Val	Gln	Glu
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Pro	Glu	Arg	Ser	Trp	Phe	Gln	Thr	Lys	Glu	Glu	Arg	Lys	Lys	Glu	Lys
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Ile	Ala	Lys	Ala	Leu	Gln	Glu	Phe	Asp	Leu	Ala	Leu	Arg	Gly	Lys	Lys
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Ala	Glu	Glu	Arg	Ser	Gln	Phe	Glu	Ile	Leu	Lys	Ala	Gln	Met	Phe	Ala
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Glu	Arg	Leu	Ala	Lys	Arg	Asn	Arg	Arg	Ala	Lys	Arg	Ala	Arg	Ala	Met
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Pro	Glu	Glu	Glu	Pro	Val	Arg	Gly	Pro	Ala	Lys	Lys	Gln	Lys	Gln	Gly
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Lys	Lys	Ser	Val	Phe	Asp	Glu	Glu	Leu	Thr	Asn	Thr	Ser	Lys	Lys	Ala
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Leu	Lys	Gln	Tyr	Arg	Ala	Gly	Pro	Ser	Phe	Glu	Glu	Arg	Lys	Gln	Leu
		740		745		750									
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&lt;210&gt; 4425

&lt;211&gt; 5199

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 4425

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Thr Lys Ala Asp Thr Leu Lys Val Lys Asp Arg Lys Lys Lys Lys Lys
      165      170      175
Lys Gly Gln Glu Ala Gly Gly Phe Phe Glu Asp Ala Ser Gln Tyr Asp
      180      185      190
Glu Asn Leu Ser Phe Gln Asp Met Asn Leu Ser Arg Pro Leu Leu Lys
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Ala Ile Thr Ala Met Gly Phe Lys Gln Pro Thr Pro Ile Gln Lys Ala
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225      230      235      240
Thr Gly Thr Gly Lys Thr Ala Ala Phe Ala Leu Pro Val Leu Glu Arg
      245      250      255
Leu Ile Tyr Lys Pro Arg Gln Ala Pro Val Thr Arg Val Leu Val Leu
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Val Pro Thr Arg Glu Leu Gly Ile Gln Val His Ser Val Thr Arg Gln
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Leu Ala Gln Phe Cys Asn Ile Thr Thr Cys Leu Ala Val Gly Gly Leu
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Ile Ala Thr Pro Gly Arg Leu Ile Asp His Leu His Asn Cys Pro Ser
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Met Leu Asp Glu Tyr Phe Glu Glu Gln Met Lys Glu Ile Ile Arg Met
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Cys Ser His His Arg Gln Thr Met Leu Phe Ser Ala Thr Met Thr Asp
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Phe Val Asn Ser Asn Thr Asp Val Ala Pro Phe Leu Arg Gln Glu Phe
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Thr Lys Lys Gln Ala His Arg Met His Ile Leu Leu Gly Leu Met Gly
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&lt;210&gt; 4424

&lt;211&gt; 768

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 4424

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Ser	Gly	Asp	Glu	Glu	Glu	Glu	Gly	Pro	Ile	Val	Leu	Gly	Arg	Arg	Gln
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Lys	Ala	Leu	Gly	Lys	Asn	Arg	Ser	Ala	Asp	Phe	Asn	Pro	Asp	Phe	Val
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Lys	Ile	Glu	Lys	Val	Arg	Lys	Lys	Arg	Lys	Thr	Glu	Asp	Lys	Glu	Ala
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Lys	Ser	Gly	Lys	Leu	Glu	Lys	Glu	Lys	Glu	Ala	Lys	Glu	Gly	Ser	Glu

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<211> 58

<212> PRT

<213> Homo sapiens

<400> 4422

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			20					25					30		
Thr	Trp	Gln	Asn	Pro	Val	Ser	Thr	Lys	Asn	Thr	Lys	Ile	Cys	Arg	Ala
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<210> 4423

<211> 2673

<212> DNA

<213> Homo sapiens

<400> 4423

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<210> 4420

<211> 91

<212> PRT

<213> Homo sapiens

<400> 4420

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Trp	Cys	Asp	Leu	Gly	Ser	Leu	Gln	Pro	Pro	Pro	Pro	Gln	Leu	Lys	Gln
		35					40					45			
Leu	Ser	Cys	Pro	Ser	His	Pro	Ser	Xaa	Asn	Tyr	Arg	Pro	Val	Pro	Pro
	50					55				60					
His	Pro	Ala	Asn	Phe	Cys	Ile	Phe	Ser	Arg	Asp	Gly	Val	Ser	Pro	Tyr
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<210> 4421

<211> 1356

<212> DNA

<213> Homo sapiens

<400> 4421

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gtgagcaggt aagagagga

980

&lt;210&gt; 4418

&lt;211&gt; 263

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 4418

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 Glu Val Met Arg Glu Met Thr Lys Lys Leu Tyr Ser Gln Tyr Glu Glu  
 35 40 45  
 Lys Leu Gln Glu Glu Gln Arg Lys His Ser Ala Glu Lys Glu Ala Leu  
 50 55 60  
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 65 70 75 80  
 Lys Met Gln Ala Ala Glu Ile Ser Leu Glu Glu Lys Asp Gln Arg Ile  
 85 90 95  
 Gly Glu Leu Asp Arg Leu Ile Glu Arg Met Glu Lys Glu Arg His Gln  
 100 105 110  
 Leu Gln Leu Gln Leu Leu Glu His Glu Thr Glu Met Ser Gly Glu Leu  
 115 120 125  
 Thr Asp Ser Asp Lys Glu Arg Tyr Gln Gln Leu Glu Glu Ala Ser Ala  
 130 135 140  
 Ser Leu Arg Glu Arg Ile Arg His Leu Asp Asp Met Val His Cys Gln  
 145 150 155 160  
 Gln Lys Lys Val Lys Gln Met Val Glu Glu Ile Glu Ser Leu Lys Lys  
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 Lys Val Gln Gln Lys Gln Leu Leu Ile Leu Gln Leu Leu Glu Lys Ile  
 180 185 190  
 Ser Phe Leu Glu Gly Glu Asn Asn Glu Leu Gln Ser Arg Leu Asp Tyr  
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 Val Gly Cys Asp Leu Leu Pro Ser Pro Thr Gly Arg Thr Arg Glu Ile  
 225 230 235 240  
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&lt;210&gt; 4419

&lt;211&gt; 369

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 4419

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&lt;400&gt; 4416

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      35           40           45
Arg Asn Gly Phe Arg His Val Leu Ser Gln Gln Glu Ile Asp Phe Phe
      50           55           60
Leu Asn Tyr Leu Ile Leu Leu Pro Asn Ile Thr Glu Val Met Arg Ser
      65           70           75           80
Leu Val Thr Phe Gly Cys Cys Ala Leu Lys Glu Pro Gly Leu Glu Phe
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Val Gly Val Ile
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&lt;210&gt; 4417

&lt;211&gt; 980

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 4417

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 <212> PRT  
 <213> Homo sapiens

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                     20                    25                    30  
 Lys Leu Glu Glu Lys Thr Ala His Ser Ser Leu Ala Leu Phe Arg Asp  
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 Asp Thr Gly Val Lys Tyr Gly Leu Val Gly Leu Glu Pro Thr Lys Val  
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 Pro  
 65

<210> 4415  
 <211> 775  
 <212> DNA  
 <213> Homo sapiens

<400> 4415  
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<210> 4416  
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 <212> PRT  
 <213> Homo sapiens

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					85					90				95		
Cys	Gln	Arg	Gln	His	Val	Ser	Leu	His	Arg	Ser	His	Gln	Ala	Pro	Leu	
			100					105					110			

Asp

&lt;210&gt; 4413

&lt;211&gt; 1097

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 4413

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1097

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&lt;210&gt; 4414

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Lys Glu Lys Cys Phe Arg Val Ser His Thr Leu Ala Gly Asp Gly Val
          340          345          350
Pro Ala Ala Pro Gly Leu Pro Pro Thr Gln Pro Gln Ala His Ala Leu
          355          360          365
Pro Leu Leu Pro Gly Leu Pro Gln Thr Leu Pro Pro Pro Pro His Leu
          370          375          380
Pro Pro Pro Pro Pro Leu Phe Pro Thr Thr Ala Ser Pro Gly Gly Arg
385          390          395          400
Met Asn Ala Asn Asn
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<210> 4411  
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 <212> DNA  
 <213> Homo sapiens

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<210> 4412  
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 <213> Homo sapiens

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Ala Gln Ala Val Cys Pro Leu Phe Ser Ser Trp Cys Pro Ala Pro Pro
35          40          45
Arg Cys His Leu Pro Gln Trp Gln Trp Gly Phe Ile Thr Gly Ser Ser
50          55          60
Gly Pro Leu Pro Met Ala Gly Gly Val Pro Gly Gly Pro Asn Gln Ala

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<210> 4410

<211> 405

<212> PRT

<213> Homo sapiens

<400> 4410

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			20				25					30			
Ser	His	Met	Ala	Thr	Arg	Ser	Arg	Glu	Asn	Ala	Arg	Arg	Arg	Gly	Thr
		35				40					45				
Pro	Glu	Pro	Glu	Glu	Ala	Gly	Arg	Arg	Gly	Gly	Lys	Arg	Pro	Lys	Pro
	50					55					60				
Pro	Pro	Gly	Val	Ala	Ser	Ala	Ser	Ala	Arg	Gly	Pro	Pro	Ala	Thr	Asp
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Gly	Leu	Gly	Ala	Lys	Val	Lys	Leu	Glu	Glu	Lys	Gln	His	His	Pro	Cys
				85				90						95	
Gln	Lys	Cys	Pro	Arg	Val	Phe	Asn	Asn	Arg	Trp	Tyr	Leu	Glu	Lys	His
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			165				170							175	
Lys	Phe	Ser	Cys	Glu	Ile	Cys	Glu	Lys	Lys	Phe	Tyr	Thr	Met	Ala	His
		180					185						190		
Val	Arg	Lys	His	Met	Val	Ala	His	Thr	Lys	Asp	Met	Pro	Phe	Thr	Cys
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Glu	Thr	Cys	Gly	Lys	Ser	Phe	Lys	Arg	Ser	Met	Ser	Leu	Lys	Val	His
	210					215					220				
Ser	Leu	Gln	His	Ser	Gly	Glu	Lys	Pro	Phe	Arg	Cys	Glu	Asn	Cys	Asp
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Glu	Arg	Phe	Gln	Tyr	Lys	Tyr	Gln	Leu	Arg	Ser	His	Met	Ser	Ile	His
			245					250						255	
Ile	Gly	His	Lys	Gln	Phe	Met	Cys	Gln	Trp	Cys	Gly	Lys	Asp	Phe	Asn
		260					265						270		
Met	Lys	Gln	Tyr	Phe	Asp	Glu	His	Met	Lys	Thr	His	Thr	Gly	Glu	Lys
		275					280					285			
Pro	Phe	Ile	Cys	Glu	Ile	Cys	Gly	Lys	Ser	Phe	Thr	Ser	Arg	Pro	Asn
	290					295					300				
Met	Lys	Arg	His	Arg	Arg	Thr	His	Thr	Gly	Glu	Lys	Pro	Tyr	Pro	Cys

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&lt;400&gt; 4408

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 35 40 45  
 Glu Ser Leu His Leu Phe Asn Ser Ile Cys Asn His Lys Tyr Phe Ser  
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 65 70 75 80  
 Lys Val Thr Lys Val His Leu Ser Ile Cys Phe Pro Glu Tyr Thr Gly  
 85 90 95  
 Pro Asn Thr Phe Glu Asp Ala Gly Asn Tyr Ile Lys Asn Gln Phe Leu  
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 Asp Leu Asn Leu Lys Lys Glu Asp Lys Glu Ile Tyr Ser His Met Thr  
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&lt;210&gt; 4409

&lt;211&gt; 4217

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 4409

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	100		105		110
Asn Ala Ile Thr Leu Gly Ser	Ala Gln Ala Gly Gln Glu Pro Gly Pro				
	115		120		125
Gly Glu Lys Arg Ala Cys Cys Ile Ser Leu					
	130		135		

&lt;210&gt; 4407

&lt;211&gt; 974

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 4407

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&lt;210&gt; 4408

&lt;211&gt; 158

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 4405

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&lt;210&gt; 4406

&lt;211&gt; 138

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 4406

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 Lys Glu Leu Tyr Asp His Ala Glu Ala Thr Ile Val Val Met Leu Val  
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 Ala Leu Asp Ser Thr Asn Val Glu Leu Ala Phe Glu Thr Val Leu Lys

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 Asp Asp Glu Glu Leu Arg His Arg Ile Arg Gln Lys Gln Glu Ala Phe  
 385 390 395 400  
 Trp Arg Lys Glu Lys Glu Gln Gln Leu Leu His Asp Lys Gln Met Glu  
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 Glu Glu Lys Gln Gln Thr Glu Arg Val Thr Lys Glu Met Asn Glu Phe  
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 Ile His Lys Glu Gln Asn Ser Leu Ser Leu Leu Glu Ala Arg Glu Ala  
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 Asp Gly Asp Val Val Asn Glu Lys Lys Arg Thr Pro Asn Glu Thr Thr  
 450 455 460  
 Ser Val Leu Glu Pro Lys Lys Glu His Lys Glu Lys Glu Lys Gln Gly  
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 Arg Ser Arg Ser Gly Ser Ser Ser Ser Gly Ser Ser Ser Ser Asn Ser  
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&lt;210&gt; 4405

&lt;211&gt; 918

<210> 4404  
 <211> 779  
 <212> PRT  
 <213> Homo sapiens

<400> 4404

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 Gly Met Met Pro Asn Gly Gln Asp Met Ser Thr Met Glu Ser Gly Pro  
 35 40 45  
 Asn Asn His Gly Asn Phe Gln Gly Asp Ser Asn Phe Asn Arg Met Trp  
 50 55 60  
 Gln Pro Glu Trp Gly Met His Gln Gln Pro Pro His Pro Pro Pro Asp  
 65 70 75 80  
 Gln Pro Trp Met Pro Pro Thr Pro Gly Pro Met Asp Ile Val Pro Pro  
 85 90 95  
 Ser Glu Asp Ser Asn Ser Gln Asp Ser Gly Glu Phe Ala Pro Asp Asn  
 100 105 110  
 Arg His Ile Phe Asn Gln Asn Asn His Asn Phe Gly Gly Pro Pro Asp  
 115 120 125  
 Asn Phe Ala Val Gly Pro Val Asn Gln Phe Asp Tyr Gln His Gly Ala  
 130 135 140  
 Ala Phe Gly Pro Pro Gln Gly Gly Phe His Pro Pro Tyr Trp Gln Pro  
 145 150 155 160  
 Gly Pro Pro Gly Pro Pro Ala Pro Pro Gln Asn Arg Arg Glu Arg Pro  
 165 170 175  
 Ser Ser Phe Arg Asp Arg Gln Arg Ser Pro Ile Ala Leu Pro Val Lys  
 180 185 190  
 Gln Glu Pro Pro Gln Ile Asp Ala Val Lys Arg Arg Thr Leu Pro Ala  
 195 200 205  
 Trp Ile Arg Glu Gly Leu Glu Lys Met Glu Arg Glu Lys Gln Lys Lys  
 210 215 220  
 Leu Glu Lys Glu Arg Met Glu Gln Gln Arg Ser Gln Leu Ser Lys Lys  
 225 230 235 240  
 Lys Lys Lys Ala Thr Glu Asp Ala Glu Gly Gly Asp Gly Pro Arg Leu  
 245 250 255  
 Pro Gln Arg Ser Lys Phe Asp Ser Asp Glu Glu Glu Asp Thr Glu  
 260 265 270  
 Asn Val Glu Ala Ala Ser Ser Gly Lys Val Thr Arg Ser Pro Ser Pro  
 275 280 285  
 Val Pro Gln Glu Glu His Ser Asp Pro Glu Met Thr Glu Glu Glu Lys  
 290 295 300  
 Glu Tyr Gln Met Met Leu Leu Thr Lys Met Leu Leu Thr Glu Ile Leu  
 305 310 315 320  
 Leu Asp Val Thr Asp Glu Glu Ile Tyr Tyr Val Ala Lys Asp Ala His  
 325 330 335  
 Arg Lys Ala Thr Lys Ala Pro Ala Lys Gln Leu Ala Gln Ser Ser Ala  
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 Leu Ala Ser Leu Thr Gly Leu Gly Gly Leu Gly Gly Tyr Gly Ser Gly  
 355 360 365  
 Asp Ser Glu Asp Glu Arg Ser Asp Arg Gly Ser Glu Ser Ser Asp Thr

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4237

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2640

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Tyr	Phe	Thr	Gln	Leu	Ser	Glu	Asp	Lys	Leu	Trp	Asp	Ile	Ile	Asn	Val
				165					170					175	
Asn	Ile	Ala	Ala	Ala	Ser	Leu	Met	Val	His	Val	Val	Leu	Pro	Gly	Met
			180					185				190			
Val	Glu	Arg	Lys	Lys	Gly	Ala	Ile	Val	Thr	Ile	Ser	Ser	Gly	Leu	Leu
		195					200					205			
Leu	Gln	Pro	Thr	Pro	Gln	Leu	Ala	Ala	Phe	Ser	Ala	Ser	Lys	Ala	Tyr
	210				215					220					
Leu	Asp	His	Phe	Ser	Arg	Ala	Leu	Gln	Tyr	Glu	Tyr	Ala	Ser	Lys	Gly
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&lt;210&gt; 4403

&lt;211&gt; 4237

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 4403

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&lt;210&gt; 4402

&lt;211&gt; 252

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 4402

Met	Ala	Ala	Val	Asp	Ser	Phe	Tyr	Leu	Leu	Tyr	Arg	Glu	Ile	Ala	Arg
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Ser	Cys	Asn	Cys	Tyr	Met	Glu	Ala	Leu	Ala	Leu	Val	Gly	Ala	Trp	Tyr
		20						25					30		
Thr	Ala	Arg	Lys	Ser	Ile	Thr	Val	Ile	Cys	Asp	Phe	Tyr	Ser	Leu	Ile
	35					40					45				
Arg	Leu	His	Phe	Ile	Pro	Arg	Leu	Gly	Ser	Arg	Ala	Asp	Leu	Ile	Lys
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Gln	Tyr	Gly	Arg	Trp	Ala	Val	Val	Ser	Gly	Ala	Thr	Asp	Gly	Ile	Gly
65				70					75				80		
Lys	Ala	Tyr	Ala	Glu	Glu	Leu	Ala	Ser	Arg	Gly	Leu	Asn	Ile	Ile	Leu
			85					90					95		
Ile	Ser	Arg	Asn	Glu	Glu	Lys	Leu	Gln	Val	Val	Ala	Lys	Asp	Ile	Ala
	100							105					110		
Asp	Thr	Tyr	Lys	Val	Glu	Thr	Asp	Ile	Ile	Val	Ala	Asp	Phe	Ser	Ser
	115					120						125			
Gly	Arg	Glu	Ile	Tyr	Leu	Pro	Ile	Arg	Glu	Ala	Leu	Lys	Asp	Lys	Asp
	130					135					140				
Val	Gly	Ile	Leu	Val	Asn	Asn	Val	Gly	Val	Phe	Tyr	Pro	Tyr	Pro	Gln

&lt;211&gt; 241

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 4400

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 Leu Gly Val Gln Ala Gly Gln Thr Gln Lys Leu Leu Gln Lys Glu  
 35 40 45  
 Ala Leu Asp Glu Gln Leu Val Gln Val Lys Glu Ala Glu Arg His His  
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 Ser Ser Pro Lys Arg Glu Leu Pro Pro Gly Ile Gly Asp Met Val Glu  
 65 70 75 80  
 Leu Met Gly Val Gln Asp Gln His Met Asp Glu Arg Asp Val Arg Arg  
 85 90 95  
 Phe Gln Leu Lys Ile Ala Glu Leu Asn Ser Val Ile Arg Lys Leu Glu  
 100 105 110  
 Asp Arg Asn Thr Leu Leu Ala Asp Glu Arg Asn Glu Leu Leu Lys Arg  
 115 120 125  
 Ser Arg Glu Thr Glu Val Gln Leu Lys Pro Leu Val Glu Lys Asn Lys  
 130 135 140  
 Arg Met Asn Lys Lys Asn Glu Asp Leu Leu Gln Ser Ile Gln Arg Met  
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 Glu Glu Lys Ile Lys Asn Leu Thr Arg Glu Asn Val Glu Met Lys Glu  
 165 170 175  
 Lys Leu Ser Ala Gln Ala Ser Leu Lys Arg His Thr Ser Leu Asn Asp  
 180 185 190  
 Leu Ser Leu Thr Arg Asp Glu Gln Glu Ile Glu Phe Leu Arg Leu Gln  
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 Val Leu Glu Gln Gln His Val Ile Asp Asp Leu Ser Leu Glu Arg Glu  
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 Arg Leu Leu Arg Ser Lys Arg His Arg Gly Lys Ser Leu Lys Pro Pro  
 225 230 235 240  
 Lys

&lt;210&gt; 4401

&lt;211&gt; 1131

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 4401

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 300

210	215	220	
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225	230	235	240
Ile His Pro Thr Glu Asn Ile Thr Phe His Ala Val Ser Ser Val Val			
245	250	255	
Asn Asn Ser Arg Asn Asn Thr Pro Glu Cys Leu Ala Pro Val Asp Leu			
260	265	270	
Val Val Lys Lys Glu Leu Arg Ala Ser Gly Ser Ser Gln Arg Met Leu			
275	280	285	
Gln Trp Leu Ala Thr Lys Ser Pro Lys Lys Glu Asp Ser Lys Thr Pro			
290	295	300	
Gln Lys Glu Glu Ser Asp Val Pro Gln Trp Ser Ser Gln Phe Leu Gln			
305	310	315	320
Lys Ser Pro Leu Pro Thr Lys Arg Gly Thr Ala Gly Leu Leu Glu Gln			
325	330	335	
Trp Leu Lys Arg Glu Lys Glu Glu Glu Pro Val Ala Lys Arg Pro Tyr			
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Ser Gln			

&lt;210&gt; 4399

&lt;211&gt; 723

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 4399

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720

aag

723

&lt;210&gt; 4400

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&lt;210&gt; 4398

&lt;211&gt; 354

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 4398

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Asn	Ser	Pro	Val	Leu	Leu	Ser	Arg	Leu	His	Phe	Glu	Lys	Asp	Ala	Asp
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Ser	Ser	Glu	Arg	Ile	Ile	Ala	Pro	Met	Arg	Trp	Gly	Leu	Val	Pro	Ser
65					70				75					80	
Trp	Phe	Lys	Glu	Ser	Asp	Pro	Ser	Lys	Leu	Gln	Phe	Asn	Thr	Thr	Asn
			85					90						95	
Cys	Arg	Ser	Asp	Thr	Val	Met	Glu	Lys	Arg	Ser	Phe	Lys	Val	Pro	Leu
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Gly	Lys	Gly	Arg	Arg	Cys	Val	Val	Leu	Ala	Asp	Gly	Phe	Tyr	Glu	Trp
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Gln	Arg	Cys	Gln	Gly	Thr	Asn	Gln	Arg	Gln	Pro	Tyr	Phe	Ile	Tyr	Phe
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			165					170						175	
Ala	Gly	Ile	Phe	Asp	Cys	Trp	Glu	Pro	Pro	Glu	Gly	Gly	Asp	Val	Leu
			180					185					190		
Tyr	Ser	Tyr	Thr	Ile	Ile	Thr	Val	Asp	Ser	Cys	Lys	Gly	Leu	Ser	Asp
		195				200						205			
Ile	His	His	Arg	Met	Pro	Ala	Ile	Leu	Asp	Gly	Glu	Glu	Ala	Val	Ser

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1980

180 185 190  
 Glu Ile Arg Asp His Cys Ala Glu Arg Leu Arg Glu Ala Gly Val Ala  
 195 200 205  
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 Phe Pro Thr Leu Val Ser Thr Trp Glu His Asp Leu Pro Ser His Arg  
 225 230 235 240  
 Arg His Ala Gly Leu Ser Leu Pro Asp Ile Ser Leu Glu Ala Leu  
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 Lys Gln Ala Gly Asp Leu Arg Ser Val Ile Arg Ser Pro Leu Ala Asn  
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 Glu Val Ser Pro Glu Thr Val Leu Arg Leu Tyr Ser Gln Ser Ser Asp  
 340 345 350  
 Gly Ala Met Arg Val Ala Arg Ala Phe Glu Arg Gly Ile Pro Val Phe  
 355 360 365  
 Gly Thr Leu Val Ala Gly Gly Ile Ser Phe Gly Ala Val Tyr Thr Met  
 370 375 380  
 Leu Gln Gly Cys Leu Asn Glu Met Ala Glu Asp Ala Gln Arg Val Arg  
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 Ile Lys Ala Leu Glu Asp Asp Glu Pro Gln Pro Glu Val Ser Leu Glu  
 405 410 415  
 Val Ala Ser Asp Asn Gly Val Glu Lys Gly Gly Ser Gly Glu Gly Gly  
 420 425 430  
 Gly Glu Glu Ala Pro Leu Ser Thr Cys Arg Lys Leu Gly Leu Leu Leu  
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 Lys Tyr Ile Leu Asp Ser Trp Lys Lys His Asp Ser Glu Glu Lys  
 450 455 460

&lt;210&gt; 4397

&lt;211&gt; 2543

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 4397

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 1800  
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 1860  
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 1893

&lt;210&gt; 4396

&lt;211&gt; 463

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 4396

Met	Ala	Thr	Ser	Lys	Leu	Pro	Val	Val	Pro	Gly	Glu	Glu	Glu	Asn	Thr
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Ile	Leu	Met	Ala	Lys	Glu	Arg	Leu	Glu	Ala	Leu	Arg	Thr	Ala	Phe	Glu
			20					25					30		
Ser	Gly	Asp	Leu	Pro	Gln	Ala	Ala	Ser	His	Leu	Gln	Glu	Leu	Leu	Ala
		35				40					45				
Ser	Thr	Glu	Ser	Ile	Arg	Leu	Glu	Val	Gly	Val	Thr	Gly	Glu	Ser	Gly
	50				55					60					
Ala	Gly	Lys	Ser	Ser	Leu	Ile	Asn	Ala	Leu	Arg	Gly	Leu	Glu	Ala	Glu
65				70					75					80	
Asp	Pro	Gly	Ala	Ala	Leu	Thr	Gly	Val	Met	Glu	Thr	Thr	Met	Gln	Pro
			85					90					95		
Ser	Pro	Tyr	Pro	His	Pro	Gln	Phe	Pro	Asp	Val	Thr	Leu	Trp	Asp	Leu
		100					105					110			
Pro	Gly	Ala	Gly	Ser	Pro	Gly	Cys	Pro	Ala	Asp	Lys	Tyr	Leu	Lys	Gln
		115				120					125				
Val	Asp	Phe	Ser	Arg	Tyr	Asp	Phe	Phe	Leu	Leu	Val	Ser	Pro	Arg	Arg
	130				135						140				
Cys	Gly	Ala	Val	Glu	Thr	Arg	Leu	Ala	Ala	Glu	Ile	Leu	Cys	Gln	Gly
145				150						155				160	
Lys	Lys	Phe	Tyr	Phe	Val	Arg	Thr	Lys	Val	Asp	Glu	Asp	Leu	Ala	Ala
			165					170					175		
Thr	Arg	Thr	Gln	Arg	Pro	Ser	Gly	Phe	Arg	Glu	Ala	Ala	Val	Leu	Gln

370	375	380
Leu Ser Asp Ala Ser His Leu Pro Lys Ala Gly Gly Val Phe Thr Pro		
385	390	400
Gly Ala Ala Phe Ser Lys Thr Lys Leu Ile Asp Arg Leu Asn Lys His		
	405	410
Gly Ile Glu Phe Ser Val Ile Ser Ser Ser Glu Val		415
	420	425

&lt;210&gt; 4395

&lt;211&gt; 1893

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 4395

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<210> 4394  
 <211> 428  
 <212> PRT  
 <213> Homo sapiens

<400> 4394

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 20           25           30
Asp Pro Glu Arg Ser Ser Pro Ala Leu Gly Val Ala Gly Arg Ser Arg
 35           40           45
Glu Lys Leu Gln Arg Val Leu Glu Lys Ala Ala Leu Lys Leu Gly Arg
 50           55           60
Pro Thr Leu Ser Ser Glu Val Gly Ile Ile Ile Cys Asp Ile Ala Asn
 65           70           75           80
Pro Ala Ser Leu Asp Glu Met Ala Lys Gln Ala Thr Val Val Leu Asn
 85           90           95
Cys Val Gly Pro Tyr Arg Phe Tyr Gly Glu Pro Val Ile Lys Ala Cys
100          105          110
Ile Glu Asn Gly Ala Ser Cys Ile Asp Ile Ser Gly Glu Pro Gln Phe
115          120          125
Leu Glu Leu Met Gln Leu Lys Tyr His Glu Lys Ala Ala Asp Lys Gly
130          135          140
Val Tyr Ile Ile Gly Ser Ser Gly Phe Asp Ser Ile Pro Ala Asp Leu
145          150          155          160
Gly Val Ile Tyr Thr Arg Asn Lys Met Asn Gly Thr Leu Thr Ala Val
165          170          175
Glu Ser Phe Leu Thr Ile His Ser Gly Pro Glu Gly Leu Ser Ile His
180          185          190
Asp Gly Thr Trp Lys Ser Ala Ile Tyr Gly Phe Gly Asp Gln Ser Asn
195          200          205
Leu Arg Lys Leu Arg Asn Val Ser Asn Leu Lys Pro Val Pro Leu Ile
210          215          220
Gly Pro Lys Leu Lys Arg Arg Trp Pro Ile Ser Tyr Cys Arg Glu Leu
225          230          235          240
Lys Gly Tyr Ser Ile Pro Phe Met Gly Ser Asp Val Ser Val Val Arg
245          250          255
Arg Thr Gln Arg Tyr Leu Tyr Glu Asn Leu Glu Glu Ser Pro Val Gln
260          265          270
Tyr Ala Ala Tyr Val Thr Val Gly Gly Ile Thr Ser Val Ile Lys Leu
275          280          285
Met Phe Ala Gly Leu Phe Phe Leu Phe Phe Val Arg Phe Gly Ile Gly
290          295          300
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305          310          315          320
Ser Lys Gln Gly Pro Thr Gln Lys Gln Ile Asp Ala Ala Ser Phe Thr
325          330          335
Leu Thr Phe Phe Gly Gln Gly Tyr Ser Gln Gly Thr Gly Thr Asp Lys
340          345          350
Asn Lys Pro Asn Ile Lys Ile Cys Thr Gln Val Lys Gly Pro Glu Ala
355          360          365
Gly Tyr Val Ala Thr Pro Ile Ala Met Val Gln Ala Ala Met Thr Leu

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<210> 4393
<211> 2171
<212> DNA
<213> Homo sapiens
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600

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Gln Leu Ala Asn Met Phe Leu Gln Tyr Leu Ser Gln Ser Leu His				320
	325		330	335

&lt;210&gt; 4391

&lt;211&gt; 988

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 4391

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988

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&lt;210&gt; 4392

&lt;211&gt; 211

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 4392

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 1740  
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 1800  
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<210> 4390

<211> 335

<212> PRT

<213> Homo sapiens

<400> 4390

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Asp	Asp	Ala	Ala	Val	Leu	Gly	Ala	Glu	Asp	Pro	Ala	Val	Tyr	Gly	Asp
			20					25					30		
Ser	Ala	Arg	Glu	Lys	Ala	Leu	Arg	Gly	Ala	Leu	Arg	Ala	Ser	Val	Glu
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Arg	Arg	Leu	Ser	Arg	His	Asp	Val	Val	Ile	Leu	Asp	Ser	Leu	Asn	Tyr
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Thr	Pro	Leu	Cys	Leu	Val	Tyr	Cys	Val	Arg	Pro	Gly	Gly	Pro	Ile	Ala
			85					90						95	
Gly	Pro	Gln	Val	Ala	Gly	Ala	Asn	Glu	Asn	Pro	Gly	Arg	Asn	Val	Ser
			100					105					110		
Val	Ser	Trp	Arg	Pro	Arg	Ala	Glu	Glu	Asp	Gly	Arg	Ala	Gln	Ala	Ala
			115				120					125			
Gly	Ser	Ser	Val	Leu	Arg	Glu	Leu	His	Thr	Ala	Asp	Ser	Val	Val	Asn
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Gly	Ser	Ala	Gln	Ala	Asp	Val	Pro	Lys	Glu	Leu	Glu	Arg	Glu	Glu	Ser
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Gly	Ala	Ala	Glu	Ser	Pro	Ala	Leu	Val	Thr	Pro	Asp	Ser	Glu	Lys	Ser
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Ala	Lys	His	Gly	Ser	Gly	Ala	Phe	Tyr	Ser	Pro	Glu	Leu	Leu	Glu	Ala
			180					185					190		
Leu	Thr	Leu	Arg	Phe	Glu	Ala	Pro	Asp	Ser	Arg	Asn	Arg	Trp	Asp	Arg
			195				200					205			
Pro	Leu	Phe	Thr	Leu	Val	Gly	Ile	Glu	Glu	Pro	Leu	Pro	Pro	Ala	Gly
			210			215					220				
Ile	Arg	Ser	Ala	Leu	Phe	Glu	Asn	Arg	Ala	Pro	Pro	Pro	His	Gln	Ser
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Thr	Gln	Ser	Gln	Pro	Leu	Ala	Ser	Gly	Ser	Phe	Leu	His	Gln	Leu	Asp
			245					250					255		
Gln	Val	Thr	Ser	Gln	Val	Leu	Ala	Gly	Leu	Met	Glu	Ala	Gln	Lys	Ser
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Ala	Val	Pro	Gly	Asp	Leu	Leu	Thr	Leu	Pro	Gly	Thr	Thr	Glu	His	Leu
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Arg	Phe	Thr	Arg	Pro	Leu	Thr	Met	Ala	Glu	Leu	Ser	Arg	Leu	Arg	Arg

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Val Leu Gln Glu Ala Gln Arg His Ala Glu Asn
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<210> 4385  
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 <212> DNA  
 <213> Homo sapiens

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<210> 4386  
 <211> 85  
 <212> PRT  
 <213> Homo sapiens

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<400> 4386
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Ser Val Pro Ser Gly Gly His Pro Ser Ser Ser His Trp Leu Pro Ala
      20              25              30
Val Ser Leu Gln Ser Pro Asp Arg Arg Leu Ser His Asp Pro Ala Ala
      35              40              45
Ser Ser Trp Ser Gly Phe Cys Gly Ile Ser Pro Ala Phe Ser Ala Phe

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210                      215                      220  
 Leu Glu Leu Arg Ser Ala Gly Val Glu Gln Leu Met Phe Ile Lys Glu  
 225                      230                      235                      240  
 Asp Leu Ile Leu Pro His Tyr His Thr Phe Tyr Asp Phe Ile Ile Ala  
                     245                      250                      255  
 Arg Ala Arg Gly Lys Ser Gly Pro Leu Phe Ser Phe Asp Val His Asp  
                     260                      265                      270  
 Asp Val Arg Leu Leu Ser Asp Ala Thr Met Glu Lys Asp Glu Ser His  
                     275                      280                      285  
 Ala Gly Lys Val Val Leu Arg Ser Trp Tyr Glu Lys Asn Lys His Ile  
                     290                      295                      300  
 Phe Pro Ala Ser Arg Trp Glu Ala Tyr Asp Pro Glu Lys Lys Trp Asp  
 305                      310                      315                      320  
 Lys Tyr Thr Ile Arg  
                     325

&lt;210&gt; 4383

&lt;211&gt; 419

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 4383

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 419

&lt;210&gt; 4384

&lt;211&gt; 139

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 4384

Arg Asp Leu Ala Cys Phe Ile Gln Phe Glu Asn Val Asn Ile Tyr Tyr  
 1                      5                      10                      15  
 Gly Thr Gln His Lys Met Lys Tyr Lys Ala Pro Thr Asp Tyr Cys Phe  
                     20                      25                      30  
 Val Leu Lys His Pro Gln Ile Gln Lys Glu Ser Gln Tyr Ile Lys Tyr  
                     35                      40                      45  
 Leu Cys Cys Asp Asp Thr Arg Thr Leu Asn Gln Trp Val Met Gly Ile  
                     50                      55                      60  
 Arg Ile Ala Lys Tyr Gly Lys Thr Leu Tyr Asp Asn Tyr Gln Arg Ala  
 65                      70                      75                      80  
 Val Ala Lys Ala Gly Leu Ala Ser Arg Trp Thr Asn Leu Gly Thr Val

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 1638

&lt;210&gt; 4382

&lt;211&gt; 325

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 4382

Met	Ala	Gln	Tyr	Lys	Gly	Thr	Met	Arg	Glu	Ala	Gly	Arg	Ala	Met	His
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Leu	Leu	Lys	Lys	Arg	Glu	Arg	Gln	Arg	Glu	Gln	Met	Glu	Val	Leu	Lys
			20				25						30		
Gln	Arg	Ile	Ala	Glu	Glu	Thr	Ile	Leu	Lys	Ser	Gln	Val	Asp	Lys	Arg
			35				40					45			
Phe	Ser	Ala	His	Tyr	Asp	Ala	Val	Glu	Ala	Glu	Leu	Lys	Ser	Ser	Ala
			50			55					60				
Val	Gly	Leu	Val	Thr	Leu	Asn	Asp	Met	Lys	Ala	Arg	Gln	Glu	Ala	Leu
65					70					75					80
Val	Arg	Glu	Arg	Glu	Arg	Gln	Leu	Ala	Lys	Arg	Gln	His	Leu	Glu	Glu
				85					90					95	
Gln	Arg	Leu	Gln	Gln	Glu	Arg	Gln	Arg	Glu	Gln	Glu	Gln	Arg	Arg	Glu
			100				105						110		
Arg	Lys	Arg	Lys	Ile	Ser	Cys	Leu	Ser	Phe	Ala	Leu	Asp	Asp	Leu	Asp
			115			120						125			
Asp	Gln	Ala	Asp	Ala	Ala	Glu	Ala	Arg	Arg	Ala	Gly	Asn	Leu	Gly	Lys
			130			135					140				
Asn	Pro	Asp	Val	Asp	Thr	Ser	Phe	Leu	Pro	Asp	Arg	Asp	Arg	Glu	Glu
145					150					155					160
Glu	Glu	Asn	Arg	Leu	Arg	Glu	Glu	Leu	Arg	Gln	Glu	Trp	Glu	Ala	Gln
				165				170						175	
Arg	Glu	Lys	Val	Lys	Asp	Glu	Glu	Met	Glu	Val	Thr	Phe	Ser	Tyr	Trp
			180					185					190		
Asp	Gly	Ser	Gly	His	Arg	Arg	Thr	Val	Arg	Val	Arg	Lys	Gly	Asn	Thr
			195				200					205			
Val	Gln	Gln	Phe	Leu	Lys	Lys	Ala	Leu	Gln	Gly	Leu	Arg	Lys	Asp	Phe

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<210> 4381
<211> 1638
<212> DNA
<213> Homo sapiens
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1080

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Thr Phe Gly Cys Arg Met Ser Pro Asp Ile Lys Gln Glu Leu Leu Arg					
	165		170		175
Cys Asp Ile Ser Cys Lys Gly Gly His Ser Thr Val Thr Asp Leu Gln					
	180		185		190
Glu Leu Leu Gly Cys Leu Tyr Glu Ser Gln Glu Glu Glu Leu Val Lys					
	195		200		205
Glu Val Met Ala Gln Phe Lys Glu Ile Ser Leu His Leu Asn Ala Val					
	210		215		220
Asp Val Val Pro Ser Ser Phe Cys Val Lys His Cys Arg Asn Leu Gln					
225		230		235	240
Lys Met Ser Leu Gln Val Ile Lys Glu Asn Leu Pro Glu Asn Val Thr					
	245		250		255
Ala Ser Glu Ser Asp Ala Glu Val Glu Arg Ser Gln Asp Asp Gln His					
	260		265		270
Met Leu Pro Phe Trp Thr Asp Leu Cys Ser Ile Phe Gly Ser Asn Lys					
	275		280		285
Asp Leu Met Gly Leu Ala Ile Asn Asp Ser Phe Leu Ser Ala Ser Leu					
	290		295		300
Val Arg Ile Leu Cys Glu Gln Ile Ala Ser Asp Thr Cys His Leu Gln					
305		310		315	320
Arg Val Val Phe Lys Asn Ile Ser Pro Ala Asp Ala His Arg Asn Leu					
	325		330		335
Xaa Pro Xaa Ala Leu Arg Gly His Lys Thr Val Thr Tyr Leu Thr Leu					
	340		345		350
Gln Gly Asn Asp Gln Asp Asp Met Phe Pro Ala Leu Cys Glu Val Leu					
	355		360		365
Arg His Pro Glu Cys Asn Leu Arg Tyr Leu Gly Leu Val Ser Cys Ser					
	370		375		380
Ala Thr Thr Gln Gln Trp Ala Asp Leu Ser Leu Ala Leu Glu Val Asn					
385		390		395	400
Gln Ser Leu Thr Cys Val Asn Leu Ser Asp Asn Glu Leu Leu Asp Glu					
	405		410		415
Gly Ala Lys Leu Leu Tyr Thr Thr Leu Arg His Pro Lys Cys Phe Leu					
	420		425		430
Gln Arg Leu Ser Leu Glu Asn Cys His Leu Thr Glu Ala Asn Cys Lys					
	435		440		445
Asp Leu Ala Ala Val Leu Val Val Ser Arg Glu Leu Thr His Leu Cys					
	450		455		460
Leu Ala Lys Asn Pro Ile Gly Asn Thr Gly Val Lys Phe Leu Cys Glu					
465		470		475	480
Gly Leu Arg Tyr Pro Glu Cys Lys Leu Gln Thr Leu Val Leu Trp Asn					
	485		490		495
Cys Asp Ile Thr Ser Asp Gly Cys Cys Asp Leu Thr Lys Leu Leu Gln					
	500		505		510
Glu Lys Ser Ser Leu Leu Cys Leu Asp Leu Gly Leu Asn His Ile Gly					
	515		520		525
Val Lys Gly Met Lys Phe Leu Cys Glu Ala Leu Arg Lys Pro Leu Cys					
	530		535		540
Asn Leu Arg Cys Leu Trp Leu Trp Gly Cys Ser Ile Pro Pro Phe Ser					
545		550		555	560
Cys Glu Asp Val Cys Ser Ala Leu Ser Cys Asn Gln Ser Leu Val Thr					

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&lt;210&gt; 4380

&lt;211&gt; 652

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 4380

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Leu	Phe	Leu	Arg	Phe	Leu	Cys	Ser	Arg	Phe	Pro	Arg	Gly	Ala	Gln
		20						25					30	Leu
Arg	Gly	Ala	Leu	Arg	Thr	Leu	Ser	Leu	Leu	Ala	Ala	Gln	Gly	Leu
		35					40					45		Trp
Ala	Gln	Thr	Ser	Val	Leu	His	Arg	Glu	Asp	Leu	Glu	Arg	Leu	Gly
		50				55				60				Val
Gln	Glu	Ser	Asp	Leu	Arg	Leu	Phe	Leu	Asp	Gly	Asp	Ile	Leu	Arg
65				70					75				80	Gln
Asp	Arg	Val	Ser	Lys	Gly	Cys	Tyr	Ser	Phe	Ile	His	Leu	Ser	Phe
			85					90					95	Gln
Gln	Phe	Leu	Thr	Ala	Leu	Phe	Tyr	Thr	Leu	Glu	Lys	Glu	Glu	Glu
		100						105					110	
Asp	Arg	Asp	Gly	His	Thr	Trp	Asp	Ile	Gly	Asp	Val	Gln	Lys	Leu
		115					120					125		Leu
Ser	Gly	Val	Glu	Arg	Leu	Arg	Asn	Pro	Asp	Leu	Ile	Gln	Ala	Gly
														Tyr

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 4379

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1380  
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1440  
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 480  
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 720  
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 780  
 ataaagtggg gctgggacac acgaaaaaaaa aa  
 812

&lt;210&gt; 4378

&lt;211&gt; 233

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 4378

Xaa Leu Gly Arg Arg Cys Pro Pro Trp Arg Gly Arg Arg Glu Gln Gly  
 1 5 10 15  
 Leu Leu Pro Pro Glu Asp Ser Arg Leu Trp Gln Tyr Leu Leu Ser Arg  
 20 25 30  
 Ser Met Arg Glu His Pro Ala Leu Arg Ser Leu Arg Leu Leu Thr Leu  
 35 40 45  
 Glu Gln Pro Gln Gly Asp Ser Met Met Thr Cys Glu Gln Ala Gln Leu  
 50 55 60  
 Leu Ala Asn Leu Ala Arg Leu Ile Gln Ala Lys Lys Ala Leu Asp Leu  
 65 70 75 80  
 Gly Thr Phe Thr Gly Tyr Ser Ala Leu Ala Leu Ala Leu Pro  
 85 90 95  
 Ala Asp Gly Arg Val Val Thr Cys Glu Val Asp Ala Gln Pro Pro Glu  
 100 105 110  
 Leu Gly Arg Pro Leu Trp Arg Gln Ala Glu Ala Glu His Lys Ile Arg  
 115 120 125  
 Leu Arg Leu Lys Pro Ala Leu Glu Thr Leu Asp Glu Leu Leu Ala Ala  
 130 135 140  
 Gly Glu Ala Gly Thr Phe Asp Val Ala Val Val Asp Ala Asp Lys Glu  
 145 150 155 160  
 Asn Cys Ser Ala Tyr Tyr Glu Arg Cys Leu Gln Leu Leu Arg Pro Gly  
 165 170 175  
 Gly Ile Leu Ala Val Leu Arg Val Leu Trp Arg Gly Lys Val Leu Gln  
 180 185 190  
 Pro Pro Lys Gly Asp Val Ala Ala Glu Cys Val Arg Asn Leu Asn Glu  
 195 200 205  
 Arg Ile Arg Arg Asp Val Arg Val Tyr Ile Ser Leu Leu Pro Leu Gly  
 210 215 220  
 Asp Gly Leu Thr Leu Ala Phe Lys Ile  
 225 230

&lt;210&gt; 4379

&lt;211&gt; 2347

130 135 140  
 Thr Glu Ile Pro Pro Val Ile Phe Leu Pro Asn Phe Leu Val Gln Arg  
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 165 170 175  
 Gly Lys Leu Ala Val Glu Arg Gly Trp Ala Ile Asn Val Gly Gly Gly  
 180 185 190  
 Phe His His Cys Ser Ser Asp Arg Gly Gly Gly Phe Cys Ala Tyr Ala  
 195 200 205  
 Asp Ile Thr Leu Ala Ile Lys Phe Leu Phe Glu Arg Val Glu Gly Ile  
 210 215 220  
 Ser Arg Ala Thr Ile Ile Asp Leu Asp Ala His Gln Gly Asn Gly His  
 225 230 235 240  
 Glu Arg Asp Phe Met Asp Asp Lys Cys Val Thr Cys Met Asp Val Tyr  
 245 250 255  
 Asn Arg His Ile Tyr Pro Gly Asp Arg Phe Ala Lys Gln Ala Ile Arg  
 260 265 270  
 Arg Lys Val Glu Leu Glu Trp Gly Thr Glu Asp Asp Glu Tyr Leu Asp  
 275 280 285  
 Lys Val Glu Arg Asn Ile Lys Lys Ser Leu Gln Glu His Leu Pro Asp  
 290 295 300  
 Val Val Val Tyr Asn Ala Gly Thr Asp Ile Leu Glu Gly Asp Arg Leu  
 305 310 315 320  
 Gly Gly Leu Ser Ile Ser Pro Ala Gly Ile Val Lys Arg Asp Glu Leu  
 325 330 335  
 Val Phe Arg Met Val Arg Gly Arg Arg Val Pro Ile Leu Met Val Thr  
 340 345 350  
 Ser Gly Gly Tyr Gln Lys Arg Thr Ala Arg Ile Ile Ala Asp Ser Ile  
 355 360 365  
 Leu Asn Leu Phe Gly Leu Gly Leu Ile Gly Pro Glu Ser Pro Ser Val  
 370 375 380  
 Ser Ala Gln Asn Ser Asp Thr Pro Leu Leu Pro Pro Ala Val Pro  
 385 390 395

&lt;210&gt; 4377

&lt;211&gt; 812

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 4377

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 120  
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 180  
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 300  
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 420



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 1920  
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 1966

&lt;210&gt; 4376

&lt;211&gt; 399

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 4376

Lys	Val	Pro	Ala	Leu	Tyr	Thr	Thr	Thr	Ser	Gly	Arg	Cys	Ser	Trp	Arg
1				5					10					15	
Asp	Phe	Leu	Met	Phe	Leu	Ser	Thr	Leu	Ser	Arg	Tyr	Ser	Ser	Ser	Ser
		20						25					30		
Val	Pro	His	Ser	Ser	Ser	Thr	Phe	Arg	Leu	Thr	Ala	Ser	Phe	Gly	Arg
		35					40					45			
Ala	Gly	Pro	Gly	Met	Leu	His	Thr	Thr	Gln	Leu	Tyr	Gln	His	Val	Pro
	50					55					60				
Glu	Thr	Arg	Trp	Pro	Ile	Val	Tyr	Ser	Pro	Arg	Tyr	Asn	Ile	Thr	Phe
65					70					75				80	
Met	Gly	Leu	Glu	Lys	Leu	His	Pro	Phe	Asp	Ala	Gly	Lys	Trp	Gly	Lys
				85					90					95	
Val	Ile	Asn	Phe	Leu	Lys	Glu	Glu	Lys	Leu	Leu	Ser	Asp	Ser	Met	Leu
		100						105					110		
Val	Glu	Ala	Arg	Glu	Ala	Ser	Glu	Glu	Asp	Leu	Leu	Val	Val	His	Thr
		115					120					125			
Arg	Arg	Tyr	Leu	Asn	Glu	Leu	Lys	Trp	Ser	Phe	Ala	Val	Ala	Thr	Ile

	180		185		190
Lys	Phe Tyr Leu Leu Asn Ile Arg	Leu Pro Val Asn Glu Lys Lys Lys			
	195		200		205
Ile	Asn Val Gly Ile Gly Glu Ile Lys Asp Ile Arg	Leu Val Gly Ile			
	210		215		220
His	Gln Asn Gly Gly Phe Thr Lys Val Trp Phe Ala Met Lys Thr Phe				
225		230		235	240
Leu	Thr Pro Ser Ile Phe Ile Ile Met Val Trp Tyr Trp Arg Arg Ile				
	245		250		255
Thr	Met Met Ser Arg Pro Pro Val Leu Leu Glu Lys Val Ile Phe Ala				
	260		265		270

&lt;210&gt; 4375

&lt;211&gt; 1966

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 4375

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1080

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 960  
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 1017

&lt;210&gt; 4374

&lt;211&gt; 272

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 4374

Met	Ala	Gly	Ala	Ile	Ile	Glu	Asn	Met	Ser	Thr	Lys	Lys	Leu	Cys	Ile
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Val	Gly	Gly	Ile	Leu	Leu	Val	Phe	Gln	Ile	Ile	Ala	Phe	Leu	Val	Gly
			20					25					30		
Gly	Leu	Ile	Ala	Pro	Gly	Pro	Thr	Thr	Ala	Val	Ser	Tyr	Met	Ser	Val
	35						40					45			
Lys	Cys	Val	Asp	Ala	Arg	Lys	Asn	His	His	Lys	Thr	Lys	Trp	Phe	Val
	50					55					60				
Pro	Trp	Gly	Pro	Asn	His	Cys	Asp	Lys	Ile	Arg	Asp	Ile	Glu	Glu	Ala
65					70				75					80	
Ile	Pro	Arg	Glu	Ile	Glu	Ala	Asn	Asp	Ile	Val	Phe	Ser	Val	His	Ile
			85					90						95	
Pro	Leu	Pro	His	Met	Glu	Met	Ser	Pro	Trp	Phe	Gln	Phe	Met	Leu	Phe
			100					105					110		
Ile	Leu	Gln	Leu	Asp	Ile	Ala	Phe	Lys	Leu	Asn	Asn	Gln	Ile	Arg	Glu
	115					120						125			
Asn	Ala	Glu	Val	Ser	Met	Asp	Val	Ser	Leu	Ala	Tyr	Arg	Asp	Asp	Ala
	130					135					140				
Phe	Ala	Glu	Trp	Thr	Glu	Met	Ala	His	Glu	Arg	Val	Pro	Arg	Lys	Leu
145					150					155				160	
Lys	Cys	Thr	Phe	Thr	Ser	Pro	Lys	Thr	Pro	Glu	His	Glu	Gly	Arg	Tyr
			165					170						175	
Tyr	Glu	Cys	Asp	Val	Leu	Pro	Phe	Met	Glu	Ile	Gly	Ser	Val	Ala	His

```

      1           5           10           15
Asp Ser Leu Asp Lys Ser Ile Thr Leu Pro Pro Asp Glu Ile Phe Arg
      20           25           30
Asn Leu Glu Asn Ala Lys Arg Phe Ala Ile Asp Ile Gly Gly Ser Leu
      35           40           45
Thr Lys Leu Ala Tyr Tyr Ser Thr Val Gln His Lys Val Ala Lys Val
      50           55           60
Arg Ser Phe Asp His Ser Gly Lys Asp Thr Glu Arg Glu His Glu Pro
      65           70           75           80
Pro Tyr Glu Ile Ser Val Gln Glu Glu Ile Thr Ala Arg Leu His Phe
      85           90           95
Ile Lys Phe Glu Asn Thr Tyr Ile Glu Ala Cys Leu Asp Phe Ile Lys
      100          105          110
Asp His Leu Val Asn Thr Glu Thr Lys Val Ile Gln Ala Thr Gly Gly
      115          120          125
Gly Ala Tyr Lys Phe Lys Asp Leu Ile Glu Glu Lys Leu Arg Leu Lys
      130          135          140
Val Asp Lys Glu Asp Val Met Thr Cys Leu Ile Lys Gly Cys Asn Phe
      145          150          155          160
Val Leu Lys Asn Ile Pro His Glu Ala Phe Val Tyr Gln Lys Asp Ser
      165          170          175
Asp Pro Glu Phe Arg Phe Gln Thr Asn His Pro His Ile Phe Pro Tyr
      180          185          190
Leu Leu Val Asn Ile Gly Ser Gly Val Ser Ile Val Lys Val Glu Thr
      195          200          205
Glu Asp Arg Phe Glu Trp Val Gly Gly Ser Ser Ile Gly Gly Gly Thr
      210          215          220
Phe Trp Gly Leu Gly Ala Leu Leu Thr Lys Thr Lys Lys Phe Asp Glu
      225          230          235          240
Leu Leu His Leu Ala Ser Arg Gly Gln His Ser Asn Val Asp Met Leu
      245          250          255
Val Arg Asp Val Tyr Gly Gly Ala His Gln Thr Leu Gly Leu Ser Gly
      260          265          270
Asn Leu Ile Ala Ser Ser Phe Gly Lys Ser Ala Thr Ala Asp Gln Glu
      275          280          285
Phe Ser Lys Glu Asp Met Ala Lys Ser Leu Leu His Met Ile
      290          295          300

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&lt;210&gt; 4373

&lt;211&gt; 1017

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 4373

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ctcgccgcgc tccagcacct ctgaagtttt gcagcgccca gaaaggaggc gaggaaggag  
120

ggagtgtgtg agaggaggga gcaaaaagct caccctaaaa catttatctc aaggagaaaa  
180

gaaaaagggg gggcgcaaaa atggctgggg caattataga aaacatgagc accaagaagc  
240

tgtgcattgt tgggtgggatt ctgctcgtgt tccaaatcat cgcctttctg gtggggaggct  
300

	275		280		285	
Asp	Ala	Glu	His	Glu	Asn	Met
	290		295		300	
Pro	Ser	Arg	Ser	Pro	Leu	His
	305		310		315	
Phe	Ser					

<210> 4371  
 <211> 907  
 <212> DNA  
 <213> Homo sapiens

<400> 4371  
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 gccatcgaca taggcgggtc gttaaccaag ctggcctact attcaacggt acagcacaaa  
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 ccctatgaga tttcagttca agaagagatc actgctcgac tgcacttcat taagtttgag  
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 aatacctaca tcgaagcctg cctggacttc atcaaagacc atctcgtcaa cacagagacc  
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 900  
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 907

<210> 4372  
 <211> 302  
 <212> PRT  
 <213> Homo sapiens

<400> 4372  
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 1080  
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<210> 4370

<211> 322

<212> PRT

<213> Homo sapiens

<400> 4370

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Leu	Leu	Thr	Leu	Ser	Ser	Ile	Ser	Glu	Leu	Ser	Ala	Arg	Leu	His	Leu
			20					25					30		
Trp	Ala	Phe	Lys	Met	Asp	Tyr	Glu	Thr	Thr	Glu	Lys	Glu	Val	Ala	Glu
	35						40					45			
Pro	Leu	Leu	Asp	Leu	Lys	Glu	Gly	Ile	Asp	Gln	Leu	Glu	Asn	Asn	Lys
	50					55				60					
Thr	Leu	Gly	Phe	Ile	Leu	Ser	Thr	Leu	Leu	Ala	Ile	Gly	Asn	Phe	Leu
65					70					75				80	
Asn	Gly	Thr	Asn	Ala	Lys	Ala	Phe	Glu	Leu	Ser	Tyr	Leu	Glu	Lys	Val
			85					90					95		
Pro	Glu	Val	Lys	Asp	Thr	Val	His	Lys	Gln	Ser	Leu	Leu	His	His	Val
			100					105					110		
Cys	Thr	Met	Val	Val	Glu	Asn	Phe	Pro	Asp	Ser	Ser	Asp	Leu	Tyr	Ser
	115							120				125			
Glu	Ile	Gly	Ala	Ile	Thr	Arg	Ser	Ala	Lys	Val	Asp	Phe	Asp	Gln	Leu
	130					135					140				
Gln	Asp	Asn	Leu	Cys	Gln	Met	Glu	Arg	Arg	Cys	Lys	Ala	Ser	Trp	Asp
145					150					155				160	
His	Leu	Lys	Ala	Ile	Ala	Lys	His	Glu	Met	Lys	Pro	Val	Leu	Lys	Gln
			165					170					175		
Arg	Met	Ser	Glu	Phe	Leu	Lys	Asp	Cys	Ala	Glu	Arg	Ile	Ile	Ile	Leu
			180					185					190		
Lys	Ile	Val	His	Arg	Arg	Ile	Ile	Asn	Arg	Phe	His	Ser	Phe	Leu	Leu
	195							200				205			
Phe	Met	Gly	His	Pro	Pro	Tyr	Ala	Ile	Arg	Glu	Val	Asn	Ile	Asn	Lys
	210					215						220			
Phe	Cys	Arg	Ile	Ile	Ser	Glu	Phe	Ala	Leu	Glu	Tyr	Arg	Thr	Thr	Arg
225					230					235				240	
Glu	Arg	Val	Leu	Gln	Gln	Lys	Gln	Lys	Arg	Ala	Asn	His	Arg	Glu	Arg
			245					250					255		
Asn	Lys	Thr	Arg	Gly	Lys	Met	Ile	Thr	Asp	Ser	Gly	Lys	Phe	Ser	Gly
			260					265					270		
Ser	Ser	Pro	Ala	Pro	Pro	Ser	Gln	Pro	Gln	Gly	Leu	Ser	Tyr	Ala	Glu

&lt;400&gt; 4368

Xaa Leu Gly Arg Gly Met Ala Leu Arg Asp Cys Thr Arg Arg Lys Glu  
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 Phe Glu Glu Thr Leu Asn Ile Leu Ile Tyr Glu Thr Pro Arg Gly Pro  
 35 40 45  
 Asp Pro Ala Leu Leu Glu Ala Thr Gly Gly Ala Ala Gly Ala Gly Gly  
 50 55 60  
 Ala Gly Arg Gly Glu Asp Glu Glu Asn Arg Glu His Arg Val Arg Arg  
 65 70 75 80  
 Ile His Val Arg Arg His Ile Thr His Asp Glu Arg Pro His Gly Gln  
 85 90 95  
 Gln Ile Val Phe Lys Asp  
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&lt;210&gt; 4369

&lt;211&gt; 1264

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 4369

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 780  
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 900  
 aaaacctcgt cccctccag gagtccctg cacatacctt ctccatcgtg tcagctgtgt  
 960

```

65          70          75          80
Arg Glu Gly Asp Lys Leu Val Ala Val Leu Glu Asn Glu Tyr Thr Gly
          85          90          95
Ala Lys Glu Glu Arg Val Val Asp Gln Val Val Val Glu Asn Gly Val
          100          105          110
Arg Pro Asp Glu Glu Ile Tyr Tyr Gly Leu Lys Glu Gly Ser Arg Asn
          115          120          125
Lys Gly Gln Ile Asp Val Glu Ala Leu Phe Ala Ile Lys Pro Gln Pro
          130          135          140
Ser Leu Asn Thr Leu Asn Glu Ala Ala Gly Asp
145          150          155

```

&lt;210&gt; 4367

&lt;211&gt; 852

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 4367

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720
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852

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&lt;210&gt; 4368

&lt;211&gt; 102

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens



<211> 75  
 <212> PRT  
 <213> Homo sapiens

<400> 4364  
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 20 25 30  
 Phe Arg Gly Gln Leu Val Gln Pro Ala Gly Ser Val Gln Ile Pro Asp  
 35 40 45  
 Asn His Ser Ser Thr Arg Ala Gln Arg Pro Gly Pro Gly Gly Arg Ser  
 50 55 60  
 Ser Ala Cys Val Pro Thr Ser Thr Ser Met Arg  
 65 70 75

<210> 4365  
 <211> 469  
 <212> DNA  
 <213> Homo sapiens

<400> 4365  
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 120  
 gtcaccgacg acatcaagcc ggggtgtggcg attggcggta cgtcgttccc gacctactac  
 180  
 cgcagcatgt acccgaaaga agtgcacatg accggcgaca tgatgctgga aaaggtctat  
 240  
 cgcgagggcg acaagctggt ggcgggtgctg gagaacgaat acaccggcgc caaggaagag  
 300  
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 360  
 gggctcaagg aaggttcgag caacaagggc cagatcgatg tcgaagccct gttcgcgatc  
 420  
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 469

<210> 4366  
 <211> 156  
 <212> PRT  
 <213> Homo sapiens

<400> 4366  
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 20 25 30  
 Asp Lys Gly Ser Gln Val Glu Ile Val Thr Asp Asp Ile Lys Pro Gly  
 35 40 45  
 Val Ala Ile Gly Gly Thr Ser Phe Pro Thr Tyr Tyr Arg Ser Met Tyr  
 50 55 60  
 Pro Lys Glu Val Ile Met Thr Gly Asp Met Met Leu Glu Lys Val Tyr

100 105 110  
 Ile Gly Ile Asn  
 115  
 <210> 4363  
 <211> 1222  
 <212> DNA  
 <213> Homo sapiens  
 <400> 4363  
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 120  
 agctatgacc ccagggccag ggaattcagt cccaccaga cctgtcatt ccatcactag  
 180  
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 240  
 aggactagat tctgtctctc caaagtggcc caagccctgt tctctgtact agggaagcca  
 300  
 gctgtgtctt ttcgaggaca gttgggtccag ccagcaggt cagttcagat accagacaac  
 360  
 cattccagca cgagggtcca gcgccctggc cccggcggtc gctccagtgc ctgtgtgccc  
 420  
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 900  
 ggtccggctc actctgctgc aggtgtggt nggagcttga gactgagag gtcaaagagg  
 960  
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 1080  
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 1140  
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 tcgcgagacg cagttctagc ga  
 1222  
 <210> 4364

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Leu Arg Val Trp Ser Met Asp Asn Met Ile Cys Thr Gln Thr Leu Leu
625                630                635                640
Arg His Gln Gly Ser Val Thr Ala Leu Ala Val Ser Arg Gly Arg Leu
        645                650                655
Phe Ser Gly Ala Val Asp Ser Thr Val Lys Val Trp Thr Cys
        660                665                670

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<210> 4361  
 <211> 574  
 <212> DNA  
 <213> Homo sapiens

<400> 4361  
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 120  
 atgagctgga gggcccacta cggggagggt tactctgtgg agttcagcta tgatgagaac  
 180  
 accgtgtaca gcatcggcga ggacgggaag gtaggcggct ccaggattca gataagagag  
 240  
 caccgggatg acatgtgggc cggctgcagg ttgtggccat acctgttact agctctgcaa  
 300  
 cctggggcct ctttttgcag ctttgttatc tgtagaatag ggataaacta gtaattcgct  
 360  
 ttacaatcct tgcgaggttt tagtgaattc agtgggagtt ggctatcctt atgaaaggaa  
 420  
 gtacaaaaaa ttactcatct taccatagat gtatctgtgg ggtctggatt tagggctgag  
 480  
 ttgtctttgc tgggcttggt agtgagtggc cccaggacca ctcatggatg tgtagtttgc  
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 tgagtggctg gggacagctt cttacatgtg taca  
 574

<210> 4362  
 <211> 116  
 <212> PRT  
 <213> Homo sapiens

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<400> 4362
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        20                25                30
Asp Met Gln Gln His Glu Cys Ala Met Ser Trp Arg Ala His Tyr Gly
        35                40                45
Glu Val Tyr Ser Val Glu Phe Ser Tyr Asp Glu Asn Thr Val Tyr Ser
        50                55                60
Ile Gly Glu Asp Gly Lys Val Gly Gly Ser Arg Ile Gln Ile Arg Glu
        65                70                75                80
His Arg Asp Asp Met Trp Ala Gly Cys Arg Leu Trp Pro Tyr Leu Leu
        85                90                95
Leu Ala Leu Gln Pro Gly Ala Ser Phe Cys Ser Phe Val Ile Cys Arg

```

3555

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 3120  
 cgtgggaact ccaactggggt ggatgggctg cctgcacagc ccctggagag gggggccaggc  
 3180  
 acaccctcag aggagctgca agcccgtggc ctggcctgct acatgccctg cttccacgtg  
 3240  
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 3300  
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 3360  
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 3660  
 a  
 3661

&lt;210&gt; 4360

&lt;211&gt; 670

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 4360

Met	Ser	Ser	Gly	Lys	Ser	Ala	Arg	Tyr	Asn	Arg	Phe	Ser	Gly	Gly	Pro
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Ser	Asn	Leu	Pro	Thr	Pro	Asp	Val	Thr	Thr	Gly	Thr	Arg	Met	Glu	Thr
			20					25					30		
Thr	Phe	Gly	Pro	Ala	Phe	Ser	Ala	Val	Thr	Thr	Ile	Thr	Lys	Ala	Asp
		35					40					45			
Gly	Thr	Ser	Thr	Tyr	Lys	Gln	His	Cys	Arg	Thr	Pro	Ser	Ser	Ser	Ser
	50					55					60				
Thr	Leu	Ala	Tyr	Ser	Pro	Arg	Asp	Glu	Glu	Asp	Ser	Met	Pro	Pro	Ile
65					70					75					80
Ser	Thr	Pro	Arg	Arg	Ser	Asp	Ser	Ala	Ile	Ser	Val	Arg	Ser	Leu	His
			85						90					95	
Ser	Glu	Ser	Ser	Met	Ser	Leu	Arg	Ser	Thr	Phe	Ser	Leu	Pro	Glu	Glu
			100					105					110		
Glu	Glu	Glu	Pro	Glu	Pro	Leu	Val	Phe	Ala	Glu	Gln	Pro	Ser	Val	Lys
		115					120					125			
Leu	Cys	Cys	Gln	Leu	Cys	Cys	Ser	Val	Phe	Lys	Asp	Pro	Val	Ile	Thr
	130					135					140				
Thr	Cys	Gly	His	Thr	Phe	Cys	Arg	Arg	Cys	Ala	Leu	Lys	Ser	Glu	Lys
145					150					155					160
Cys	Pro	Val	Asp	Asn	Val	Lys	Leu	Thr	Val	Val	Val	Asn	Asn	Ile	Ala
			165					170						175	
Val	Ala	Glu	Gln	Ile	Gly	Glu	Leu	Phe	Ile	His	Cys	Arg	His	Gly	Cys

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115

&lt;210&gt; 4359

&lt;211&gt; 3661

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 4359

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120  
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240  
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1320  
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1380

435                      440                      445  
 Lys Asn Ser Ala Lys Glu Glu Thr Lys Phe Ala Gln Val Val Leu Gln  
 450                      455                      460  
 Asp Leu Asp Lys Lys Glu Asn Gly Leu Arg Asp Ile Leu Ala Val Leu  
 465                      470                      475                      480  
 Thr Met Lys Arg Asp Gly Ser Leu His Val Thr Cys Thr Asp Gln Glu  
 485                      490                      495  
 Thr Gly Lys Cys Glu Ala Ile Ser Ile Glu Ile Ala Ser  
 500                      505

&lt;210&gt; 4357

&lt;211&gt; 421

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 4357

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acgatcggtg atgcatgtgg ttctgctggc aaagcagcc ctttggttgt gaacttcacg  
120

atacctgtgt gcagctctgt catttcact ctgctctgct gcacagaagg cagaagccct  
180

ggccgtcccc tgctgtgttc ttcaggagaa acgtcagggg ccttcctcca aggttctcca  
240

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300

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360

atggcatggg gcgcttttgc aggtctctaa aggtcggcct gcagatctcc ctggactact  
420

g

421

&lt;210&gt; 4358

&lt;211&gt; 115

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 4358

Met Trp Phe Cys Gly Gln Ser Thr Pro Phe Gly Cys Glu Leu His Asp  
1                      5                      10                      15

Thr Cys Val Gln Leu Cys His Phe His Ser Ala Leu Leu His Arg Arg  
20                      25                      30

Gln Lys Pro Trp Pro Ser Pro Ala Val Phe Phe Arg Arg Asn Val Arg  
35                      40                      45

Gly Leu Pro Pro Arg Phe Ser Ser Pro Thr Pro Leu Trp Arg Lys Val  
50                      55                      60

Leu Ser Thr Ala Val Val Gly Ala Pro Leu Leu Leu Gly Ala Arg Tyr  
65                      70                      75                      80

Val Met Ala Glu Ala Arg Glu Lys Arg Arg Met Arg Leu Val Val Asp  
85                      90                      95

Gly Met Gly Arg Phe Cys Arg Ser Leu Lys Val Gly Leu Gln Ile Ser  
100                      105                      110

Leu Asp Tyr



1	5	10	15
Val Tyr Lys Asp Gly Arg Ala Gly Val Val Ala Asn Asp Ala Gly Asp			
20	25	30	
Arg Val Thr Pro Ala Val Val Ala Tyr Ser Glu Asn Glu Glu Ile Val			
35	40	45	
Gly Leu Ala Ala Lys Gln Ser Arg Ile Arg Asn Ile Ser Asn Thr Val			
50	55	60	
Met Lys Val Lys Gln Ile Leu Gly Arg Ser Ser Ser Asp Pro Gln Ala			
65	70	75	80
Gln Lys Tyr Ile Ala Glu Ser Lys Cys Leu Val Ile Glu Lys Asn Gly			
85	90	95	
Lys Leu Arg Tyr Glu Ile Asp Thr Gly Glu Glu Thr Lys Phe Val Asn			
100	105	110	
Pro Glu Asp Val Ala Arg Leu Ile Phe Ser Lys Met Lys Glu Thr Ala			
115	120	125	
His Ser Val Leu Gly Ser Asp Ala Asn Asp Val Val Ile Thr Val Pro			
130	135	140	
Phe Asp Phe Gly Glu Lys Gln Lys Asn Ala Leu Gly Glu Ala Ala Arg			
145	150	155	160
Ala Ala Gly Phe Asn Val Leu Arg Leu Ile His Glu Pro Ser Ala Ala			
165	170	175	
Leu Leu Ala Tyr Gly Ile Gly Gln Asp Ser Pro Thr Gly Lys Ser Asn			
180	185	190	
Ile Leu Val Phe Lys Leu Gly Gly Thr Ser Leu Ser Leu Ser Val Met			
195	200	205	
Glu Val Asn Ser Gly Ile Tyr Arg Val Leu Ser Thr Asn Thr Asp Asp			
210	215	220	
Asn Ile Gly Gly Ala His Phe Thr Glu Thr Leu Ala Gln Tyr Leu Ala			
225	230	235	240
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Val Lys Gly Val Asp Glu Ser Gly Ala Ser Arg Phe Thr Val Leu Phe			
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&lt;211&gt; 509

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 4356

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 Lys Glu Ser Ile Leu Glu Lys Tyr Gly Gly Gln Glu His Leu Asp Ala  
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 Pro Pro Ala Glu Leu Leu Leu Ala Gln Thr Glu Asp Tyr Val Glu Tyr  
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 Gly Ser Tyr Trp Lys Glu Gly Arg Trp Gly Tyr Lys Cys Cys His Ser  
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 1680  
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 1920  
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 1980  
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 2040

&lt;210&gt; 4350

&lt;211&gt; 113

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 4350

Xaa Phe Phe Phe Leu Arg Tyr Lys Asn Leu Tyr Leu Tyr Tyr Asn Asp  
 1 5 10 15  
 Ile Arg Thr Gln His Gly Pro His Gly Gly Gln Val Ala Gly Gly Pro  
 20 25 30  
 Phe Pro Pro Leu Ala His Ala Pro Leu Thr Gly Thr Arg Pro Ser Cys  
 35 40 45  
 Gly Pro Arg Leu Trp His Gly Thr Cys Pro Ser Ala Gln His Gly Pro  
 50 55 60  
 Gly Ala Thr Leu Leu Ala Glu Gly Gln Gly Pro Leu Cys Arg Gln Trp  
 65 70 75 80  
 Gly Gly Gly Pro Arg Phe Pro Asp Arg Gly Arg Gln Gly Thr Gly Glu  
 85 90 95  
 Pro Ala Ser Pro Ser Gly Gln His Gly Pro Gly Gln Thr Glu Gln Gly  
 100 105 110  
 Pro

&lt;400&gt; 4348

Asp Ser Ser Gly Ile Ser Thr Pro Arg Pro Pro Pro Arg Gly Ser Arg  
 1 5 10 15  
 Ala Ala Gly Pro Ala Ala Gln Ser Arg Pro Leu Arg Pro Ala Glu Ala  
 20 25 30  
 Arg Gln Cys Arg Gly Arg Ser Arg Arg Arg Val Ala Arg Ser Ser Leu  
 35 40 45  
 Pro Ser Pro Ser Ala Arg Pro Gly Arg Gly Gly Arg Pro Gly Pro Gly  
 50 55 60  
 Gly Ser Ala Gly Cys Pro Gly Leu  
 65 70

&lt;210&gt; 4349

&lt;211&gt; 2040

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 4349

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 ctcaccggca ccaggccctc gtgtggcccc cgactctggc acggaacctg ccctagtggc  
 180  
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 300  
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 360  
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 420  
 gcaaagcctt gctgcagcct ctcccactct gcgaggatgg cgggggtctg ctatgtggtt  
 480  
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 720  
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 1080

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 349

<210> 4346

<211> 116

<212> PRT

<213> Homo sapiens

<400> 4346

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Gln	Lys	Gly	Arg	Ser	Val	Ser	Ala	Ala	Asp	Xaa	Glu	Arg	Ala	Glu	Pro
		20					25						30		
Thr	Leu	Thr	His	Met	Ser	Ile	Thr	Arg	Leu	His	Glu	Gln	Lys	Leu	Val
	35					40					45				
Gln	His	Val	Val	Ser	Gln	Asn	Cys	Asp	Gly	Leu	His	Leu	Arg	Ser	Gly
	50				55					60					
Leu	Xaa	Arg	Thr	Ala	Ile	Ser	Glu	Leu	His	Gly	Asn	Met	Tyr	Ile	Glu
65				70					75					80	
Gly	Val	Arg	Ala	Gly	Val	Arg	Cys	Asp	Gly	Ala	His	Cys	Pro	Pro	Gln
			85					90					95		
Thr	Pro	Asp	Arg	Pro	Asp	Leu	Pro	Gln	Val	Trp	Asp	Pro	Ala	Ala	Gly
		100					105						110		
His	His	Cys	Ala												
		115													

<210> 4347

<211> 353

<212> DNA

<213> Homo sapiens

<400> 4347

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 120  
 ccccggggct cgcgcgagc ggggtccagct gcacaaagcc gtccgctccg tcccgccgag  
 180  
 gccaggcagt gcagaggcag gagccgccgt cgggtagcga gatcttcact gccgagccca  
 240  
 agcgcgcgcc cagggcgtagg agggcgcccg ggcccaggcg gcagcgctgg gtgccccggg  
 300  
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 353

<210> 4348

<211> 72

<212> PRT

<213> Homo sapiens

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 120  
 ttcagaacag ggcgcccgcg gttgggcgcg tggacagagt cctccggcgg ccgcgcgcgt  
 180  
 gggccaggcg gagagaggcg gacggacttc aggggaggcc cgggccacgc cgcggaaact  
 240  
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 300  
 tggcttcagc tcgcggcgcg ttcccagagc tcctcagtga tccggctttc ggattgttcg  
 360  
 cctttcatct catttgccgt tgtccaaatt ctaatttaaa actcatgtgt tacttgcgtg  
 420  
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 480  
 ttaccacaat aaaaataaa  
 499

&lt;210&gt; 4344

&lt;211&gt; 118

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 4344

Met	Ala	Pro	Ser	Arg	Pro	Arg	Leu	Pro	Pro	Ser	Pro	Pro	Gln	Arg	Leu
1				5				10					15		
Arg	Val	Val	Arg	Gly	Arg	Gly	Pro	Phe	Ala	Phe	Arg	Thr	Gly	Arg	Pro
			20				25						30		
Thr	Leu	Gly	Ala	Trp	Thr	Glu	Ser	Ser	Gly	Gly	Arg	Ala	Ala	Gly	Pro
		35					40					45			
Gly	Gly	Glu	Arg	Arg	Thr	Asp	Phe	Arg	Gly	Gly	Pro	Gly	His	Ala	Ala
	50					55					60				
Glu	Thr	Thr	Arg	Leu	Pro	Gly	Gly	Gly	Gln	Asp	Arg	Pro	Cys	Pro	Asp
65					70					75				80	
Lys	Met	Glu	Phe	Pro	Val	Trp	Leu	Gln	Leu	Ala	Ala	Arg	Ser	Gln	Ser
				85					90					95	
Ser	Ser	Val	Ile	Arg	Leu	Ser	Asp	Cys	Ser	Pro	Phe	Ile	Ser	Phe	Ala
			100					105					110		
Val	Val	Gln	Ile	Leu	Ile										
			115												

&lt;210&gt; 4345

&lt;211&gt; 349

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 4345

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 agcgtagtg ctgccgacnc tgagcgagcc gagccaaccc taccacacat gagcatcacc  
 120  
 cgtctgcatg agcagaagct ggtgcagcat gtggtgtctc agaactgtga cgggctccac  
 180

&lt;400&gt; 4341

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 60  
 gattttaaat tataagcttt aaagaatttt ttttctagaa aaaggggatg gaaaaaaaaag  
 120  
 gacctgaggg agccatatgc atcaagttag tgtttctcca taacagaata tttataagag  
 180  
 aacatgtata gtgccctctt ttgagttagt ccgacagaca ccaagccctc cttttcacca  
 240  
 agtcccaggc ttgcattcca gcctcttgag ctctgccctc tctcaggtgg atctttgtgt  
 300  
 tggaccttac gtttcagcaa cctcaccatg gccacataac ccacaacctt ttaaaacagt  
 360  
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 420  
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 480  
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 540  
 aatcacttat tttattagga aaaagaggta actgttccaa agtgtagtgt cctttgttga  
 600  
 aggaggagg atgtaagcat agatttgttc ttgtttctgg ctattctcag ctcaagccat  
 660  
 gtttaattca ttctttgtaa aagccttcaa ttg  
 693

&lt;210&gt; 4342

&lt;211&gt; 103

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 4342

Met	Val	Arg	Leu	Leu	Lys	Arg	Lys	Val	Gln	His	Lys	Asp	Pro	Pro	Glu
1				5					10					15	
Arg	Gly	Gln	Ser	Ser	Arg	Gly	Trp	Asn	Ala	Ser	Leu	Gly	Leu	Gly	Glu
			20					25					30		
Lys	Glu	Gly	Leu	Val	Ser	Val	Gly	Ile	Thr	Gln	Lys	Arg	Ala	Leu	Tyr
		35				40						45			
Met	Phe	Ser	Tyr	Lys	Tyr	Ser	Val	Met	Glu	Lys	His	Ser	Leu	Asp	Ala
	50					55					60				
Tyr	Gly	Ser	Leu	Arg	Ser	Phe	Phe	Phe	His	Pro	Leu	Phe	Leu	Glu	Lys
65				70					75					80	
Lys	Phe	Phe	Lys	Ala	Tyr	Asn	Leu	Lys	Ser	Thr	Ser	Thr	Tyr	Ser	Arg
			85				90						95		
Asn	Ile	Val	Ala	Phe	Ser	Ile									
						100									

&lt;210&gt; 4343

&lt;211&gt; 499

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 4343

690	695	700
Ala Val Lys His Pro Arg Leu Leu Ser Phe Thr Ser Gln Leu Lys Ala		
705	710	715
Gly Lys Gly Leu Thr Ile Val Gly Ser Val Leu Glu Gly Thr Tyr Leu		720
	725	730
Asp Lys His Met Glu Ala Gln Arg Ala Glu Glu Asn Ile Arg Ser Leu		735
	740	745
Met Ser Thr Glu Lys Thr Lys Gly Phe Cys Gln Leu Val Val Ser Ser		750
	755	760
Ser Leu Arg Asp Gly Met Ser His Leu Ile Gln Ser Ala Gly Leu Gly		765
	770	775
Gly Leu Lys His Asn Thr Val Leu Met Ala Trp Pro Ala Ser Trp Lys		780
785	790	795
Gln Glu Asp Asn Pro Phe Ser Trp Lys Asn Phe Val Asp Thr Val Arg		800
	805	810
Asp Thr Thr Ala Ala His Gln Ala Leu Leu Val Ala Lys Asn Val Asp		815
	820	825
Ser Phe Pro Gln Asn Gln Glu Arg Phe Gly Gly Gly His Ile Asp Val		830
	835	840
Trp Trp Ile Val His Asp Gly Gly Met Leu Met Leu Leu Pro Phe Leu		845
	850	855
Leu Arg Gln His Lys Val Trp Arg Lys Cys Arg Met Arg Ile Phe Thr		860
865	870	875
Val Ala Gln Val Asp Asp Asn Ser Ile Gln Met Lys Lys Asp Leu Gln		880
	885	890
Met Phe Leu Tyr His Leu Arg Ile Ser Ala Glu Val Glu Val Val Glu		895
	900	905
Met Val Glu Asn Asp Ile Ser Ala Phe Thr Tyr Glu Arg Thr Leu Met		910
	915	920
Met Glu Gln Arg Ser Gln Met Leu Lys Gln Met Gln Leu Ser Lys Asn		925
	930	935
Glu Gln Glu Arg Glu Ala Gln Leu Ile His Asp Arg Asn Thr Ala Ser		940
945	950	955
His Thr Ala Ala Ala Ala Arg Thr Gln Ala Pro Pro Thr Pro Asp Lys		960
	965	970
Val Gln Met Thr Trp Thr Arg Glu Lys Leu Ile Ala Glu Lys Tyr Arg		975
	980	985
Ser Arg Asp Thr Ser Leu Ser Gly Phe Lys Asp Leu Phe Ser Met Lys		990
	995	1000
Pro Glu Trp Gly Asn Leu Asp Gln Ser Asn Val Arg Arg Met His Thr		1005
	1010	1015
Ala Val Lys Leu Asn Gly Val Val Leu Asn Lys Ser Gln Asp Ala Gln		1020
1025	1030	1035
Leu Val Leu Leu Asn Met Pro Gly Pro Pro Lys Asn Arg Gln Gly Asp		1040
	1045	1050
Glu Asn Tyr Met Glu Phe Leu Glu Val Leu Thr Glu Gly Leu Asn Arg		1055
	1060	1065
Val Leu Leu Val Arg Gly Gly Gly Arg Glu Val Ile Thr Ile Tyr Ser		1070
	1075	1080
		1085

&lt;210&gt; 4341

&lt;211&gt; 693

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

3535



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&lt;210&gt; 4340

&lt;211&gt; 1088

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 4340

Met	Pro	Thr	Asn	Phe	Thr	Val	Val	Pro	Val	Glu	Ala	His	Ala	Asp	Gly
1				5					10					15	
Gly	Gly	Asp	Glu	Thr	Ala	Glu	Arg	Thr	Glu	Ala	Pro	Gly	Thr	Pro	Glu
		20						25					30		
Gly	Pro	Glu	Pro	Glu	Arg	Pro	Ser	Pro	Gly	Asp	Gly	Asn	Pro	Arg	Glu
		35					40					45			
Asn	Ser	Pro	Phe	Leu	Asn	Asn	Val	Glu	Val	Glu	Gln	Glu	Ser	Phe	Phe
	50					55				60					
Glu	Gly	Lys	Asn	Met	Ala	Leu	Phe	Glu	Glu	Glu	Met	Asp	Ser	Asn	Pro
65					70					75					80
Met	Val	Ser	Ser	Leu	Leu	Asn	Lys	Leu	Ala	Asn	Tyr	Thr	Asn	Leu	Ser
				85					90					95	
Gln	Gly	Val	Val	Glu	His	Glu	Glu	Asp	Glu	Glu	Ser	Arg	Arg	Arg	Glu
			100					105					110		
Ala	Lys	Ala	Pro	Arg	Met	Gly	Thr	Phe	Ile	Gly	Val	Tyr	Leu	Pro	Cys
		115					120					125			
Leu	Gln	Asn	Ile	Leu	Gly	Val	Ile	Leu	Phe	Leu	Arg	Leu	Thr	Trp	Ile
	130					135					140				
Val	Gly	Val	Ala	Gly	Val	Leu	Glu	Ser	Phe	Leu	Ile	Val	Ala	Met	Cys
145					150					155					160
Cys	Thr	Cys	Thr	Met	Leu	Thr	Ala	Ile	Ser	Met	Ser	Ala	Ile	Ala	Thr
				165					170					175	
Asn	Gly	Val	Val	Pro	Ala	Gly	Gly	Ser	Tyr	Tyr	Met	Ile	Ser	Arg	Ser
			180					185					190		
Leu	Gly	Pro	Glu	Phe	Gly	Gly	Ala	Val	Gly	Leu	Cys	Phe	Tyr	Leu	Gly
		195					200					205			
Thr	Thr	Phe	Ala	Gly	Ala	Met	Tyr	Ile	Leu	Gly	Thr	Ile	Glu	Ile	Phe
	210						215					220			
Leu	Thr	Tyr	Ile	Ser	Pro	Gly	Ala	Ala	Ile	Phe	Gln	Ala	Glu	Ala	Ala
225					230					235					240
Gly	Gly	Glu	Ala	Ala	Ala	Met	Leu	His	Asn	Met	Arg	Val	Tyr	Gly	Thr
				245					250					255	
Cys	Thr	Leu	Val	Leu	Met	Ala	Leu	Val	Val	Phe	Val	Gly	Val	Lys	Tyr

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325

&lt;210&gt; 4337

&lt;211&gt; 461

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 4337

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&lt;210&gt; 4338

&lt;211&gt; 118

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 4338

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 Thr Trp Phe Pro Ser Ser Gly Ala His Gly Gly Glu Val Glu Gly Gly  
 35 40 45  
 Arg Arg Glu Gly Ala Thr Cys Cys Ser Val Glu Lys Gln Gln Ser Pro  
 50 55 60  
 Leu Gln Pro Ala Gln Leu Ala Phe Leu Thr Leu Ser Leu Pro Gly Leu  
 65 70 75 80  
 Cys Gly Arg Glu Gly Gln Ala Arg Trp Pro Ala Arg Asp Val Val Phe  
 85 90 95  
 Ser Phe Val Leu Cys Thr Met Pro Gln Lys Asn Ile Leu Leu Ile Cys  
 100 105 110  
 Asn Gln Asp Asn Ile Ile  
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&lt;210&gt; 4339

&lt;211&gt; 5269

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 4339

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 1200  
 tgtgctcgcg a  
 1211

<210> 4336

<211> 325

<212> PRT

<213> Homo sapiens

<400> 4336

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Pro	Pro	Leu	Lys	Thr	Phe	Val	Pro	Ser	Val	Ser	Pro	Phe	Gln	Leu	Ala
			20					25					30		
Leu	Gly	Ala	Ala	Leu	Val	Asn	Val	Gln	Ile	Pro	Leu	Leu	Leu	Gly	Gln
		35					40					45			
Leu	Val	Glu	Val	Val	Ala	Lys	Tyr	Thr	Arg	Asp	His	Val	Gly	Ser	Phe
	50					55				60					
Met	Thr	Glu	Ser	Gln	Asn	Leu	Ser	Thr	His	Leu	Leu	Ile	Leu	Tyr	Gly
65				70					75					80	
Val	Gln	Gly	Leu	Leu	Thr	Phe	Gly	Tyr	Leu	Val	Leu	Leu	Ser	His	Val
			85				90						95		
Gly	Glu	Arg	Met	Ala	Val	Asp	Met	Arg	Arg	Ala	Leu	Phe	Ser	Ser	Leu
			100				105						110		
Leu	Arg	Gln	Asp	Ile	Thr	Phe	Phe	Asp	Ala	Asn	Lys	Thr	Gly	Gln	Leu
		115					120					125			
Val	Ser	Arg	Leu	Thr	Thr	Asp	Val	Gln	Glu	Phe	Lys	Ser	Ser	Phe	Lys
	130					135					140				
Leu	Val	Ile	Ser	Gln	Gly	Leu	Arg	Ser	Cys	Thr	Gln	Val	Ala	Gly	Cys
145				150					155					160	
Leu	Val	Ser	Leu	Ser	Met	Leu	Ser	Thr	Arg	Leu	Thr	Leu	Leu	Leu	Met
			165					170					175		
Val	Ala	Thr	Pro	Ala	Leu	Met	Gly	Val	Gly	Thr	Leu	Met	Gly	Ser	Gly
		180					185					190			
Leu	Arg	Lys	Leu	Ser	Arg	Gln	Cys	Gln	Glu	Gln	Ile	Ala	Arg	Ala	Met
		195				200						205			
Gly	Val	Ala	Asp	Glu	Ala	Leu	Gly	Asn	Val	Arg	Thr	Val	Arg	Ala	Phe
	210					215					220				
Ala	Met	Glu	Gln	Arg	Glu	Glu	Glu	Arg	Tyr	Gly	Ala	Glu	Leu	Glu	Ala
225				230						235				240	
Cys	Arg	Cys	Arg	Ala	Glu	Glu	Leu	Gly	Arg	Gly	Ile	Ala	Leu	Phe	Gln
			245					250					255		
Gly	Leu	Ser	Asn	Ile	Ala	Phe	Asn	Cys	Met	Val	Leu	Gly	Thr	Leu	Phe
		260					265					270			
Ile	Gly	Gly	Ser	Leu	Val	Ala	Gly	Gln	Gln	Leu	Thr	Gly	Gly	Asp	Leu
	275						280					285			
Met	Ser	Phe	Leu	Val	Ala	Ser	Gln	Thr	Val	Gln	Ser	Phe	Leu	Arg	Val
	290					295					300				
Ala	Pro	Cys	Pro	Asn	Ser	Leu	Pro	Leu	Gln	Ala	Val	Thr	Leu	His	Ala
305				310						315				320	
Trp	Lys	Asp	His	Pro											

	100		105		110										
Asp	Lys	Gln	Val	Lys	Ser	Ile	Glu	Arg	Phe	Leu	Arg	Arg	Leu	Glu	Phe
	115		120		125										
His	Ala	Ser	Lys	Ile	Asp	Glu	Leu	Tyr	Glu	Ala	Tyr	Cys	Val	Gln	Arg
	130		135		140										
Arg	Leu	Arg	Asp	Gly	Ala	Tyr	Asn	Met	Val	Arg	Ala	Tyr	Thr	Thr	Gly
145			150		155									160	
Ser	Pro	Gly	Ser	Arg	Glu	Ala	Arg	Asp	Ser	Leu	Ala	Glu	Ala	Thr	Arg
			165		170									175	
Gly	His	Arg	Glu	Tyr	Thr	Glu	Val	Gly	Asp	Gly	Gly	Pro			
	180						185								

&lt;210&gt; 4335

&lt;211&gt; 1211

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 4335

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1080

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 1278

&lt;210&gt; 4334

&lt;211&gt; 189

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 4334

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Phe	Ala	Gly	Val	Leu	Gly	Ser	His	Glu	Arg	Gly	Pro	Arg	Ser	Phe	Pro
		20						25					30		
Val	Phe	Ser	Pro	Pro	Gly	Pro	Pro	Arg	Lys	Pro	Pro	Ala	Leu	Ser	Arg
		35					40					45			
Val	Ser	Arg	Met	Phe	Ser	Val	Ala	His	Pro	Ala	Ala	Lys	Val	Pro	Gln
		50				55					60				
Pro	Glu	Arg	Leu	Asp	Leu	Val	Tyr	Thr	Ala	Leu	Lys	Arg	Gly	Leu	Thr
65					70					75				80	
Ala	Tyr	Leu	Glu	Val	His	Gln	Gln	Glu	Gln	Glu	Lys	Leu	Gln	Gly	Gln
				85					90				95		
Ile	Arg	Glu	Ser	Lys	Arg	Asn	Ser	Arg	Leu	Gly	Phe	Leu	Tyr	Asp	Leu



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Pro Phe Ala Glu Glu Asp Leu Ser Ala Asp Ala Leu Leu Asn Ile Leu		
65	70	75
Ser Glu Val Lys Ile Gln Glu Phe Lys Pro Ser Asn Lys Val Val Gln		80
	85	90
Thr Asp Glu Thr Ala Arg Lys Pro Asp His Val Pro Ile Ser Ser Glu		95
	100	105
Asp Glu Arg Asn Ala Ile Phe Gln Leu Glu Lys Ala Ile Leu Ser Asn		110
	115	120
Glu Ala Thr Lys Ser Asp Leu Gln Met Ala Val Leu Ser Phe Glu Lys		125
	130	135
Asp Asp Asp His Asn Gly His Ile Asp Phe Ile Thr Ala Ala Ser Asn		140
145	150	155
Leu Arg Ala Lys Met Tyr Ser Ile Glu Pro Ala Asp Arg Phe Lys Thr		160
	165	170
Lys Arg Ile Ala Gly Lys Ile Ile Pro Ala Ile Ala Thr Thr Thr Ala		175
	180	185
Thr Val Ser Gly Leu Val Ala Leu Glu Met Ile Lys Val Thr Gly Gly		190
	195	200
Tyr Pro Phe Glu Ala Tyr Lys Asn Cys Phe Leu Asn Leu Ala Ile Pro		205
	210	215
Ile Val Val Phe Thr Glu Thr Thr Glu Val Arg Lys Thr Lys Ile Arg		220
225	230	235
Asn Gly Ile Ser Phe Thr Ile Trp Asp Arg Trp Thr Val His Gly Lys		240
	245	250
Glu Asp Phe Thr Leu Leu Asp Phe Ile Asn Ala Val Lys Glu Lys Tyr		255
	260	265
Gly Ile Glu Pro Thr Met Val Val Gln Gly Val Lys Met Leu Tyr Val		270
	275	280
Pro Val Met Pro Gly His Ala Lys Arg Leu Lys Leu Thr Met His Lys		285
	290	295
Leu Val Lys Pro Thr Thr Glu Lys Lys Tyr Val Asp Leu Thr Val Ser		300
305	310	315
Phe Ala Pro Asp Ile Asp Gly Asp Glu Asp Leu Pro Gly Pro Pro Val		320
	325	330
Arg Tyr Tyr Phe Ser His Asp Thr Asp		335
	340	345

&lt;210&gt; 4333

&lt;211&gt; 1278

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 4333

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120

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180

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<210> 4332

<211> 345

<212> PRT

<213> Homo sapiens

<400> 4332

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			20				25					30			
Arg	Pro	Pro	Ser	Pro	Ile	Lys	Phe	Asp	Leu	Asn	Glu	Pro	Leu	His	Leu
			35				40				45				
Ser	Phe	Leu	Gln	Asn	Ala	Ala	Lys	Leu	Tyr	Ala	Thr	Val	Tyr	Cys	Ile

50                      55                      60  
 Gln Glu Ala Trp Val Asn Ala Leu Leu Gly Arg Ile Phe Trp Asp Phe  
 65                      70                      75                      80  
 Leu Gly Glu Lys Tyr Trp Ser Asp Leu Val Ser Lys Lys Ile Gln Met  
                     85                      90                      95  
 Lys Leu Ser Lys Ile Lys Leu Pro Tyr Phe Met Asn Glu Leu Thr Leu  
                     100                      105                      110  
 Thr Glu Leu Asp Met Gly Val Ala Val Pro Lys Ile Leu Gln Ala Phe  
                     115                      120                      125  
 Lys Pro Tyr Val Asp His Gln Gly Leu Trp Ile Asp Leu Glu Met Ser  
                     130                      135                      140  
 Tyr Asn Gly Ser Phe Leu Met Thr Leu Glu Thr Lys Met Asn Leu Pro  
 145                      150                      155                      160  
 Lys Leu Gly Lys Glu Pro Leu Val Glu Ala Leu Lys Val Gly Glu Ile  
                     165                      170                      175  
 Gly Lys Glu Gly Cys Arg Pro Arg Ala Phe Cys Leu Ala Asp Ser Asp  
                     180                      185                      190  
 Glu Glu Ser Ser Ser Ala Gly Ser Ser Glu Glu Asp Asp Ala Pro Glu  
                     195                      200                      205  
 Pro Ala Gly Glu Thr Asn Ser Ser Ser Gln Gly Glu Gly Tyr Val Gly  
                     210                      215                      220  
 Gly His Arg Thr Ser Lys Ile Met Arg Phe Val Asp Lys Ile Thr Lys  
 225                      230                      235                      240  
 Ser Lys Tyr Phe Gln Lys Ala Thr Glu Thr Glu Phe Ile Lys Arg Xaa  
                     245                      250                      255  
 Ile Glu Glu Val Ser Asn Thr Pro Leu Leu Leu Thr Val Glu Val Gln  
                     260                      265                      270  
 Glu Cys Arg Gly Thr Leu Ala Val Asn Ile Pro Pro Pro Pro Thr Asp  
                     275                      280                      285  
 Arg Val Trp Tyr Gly Phe Arg Lys Pro Pro His Val Glu Leu Lys Ala  
                     290                      295                      300  
 Arg Pro Lys Leu Gly Glu Arg Glu Val Thr Leu Val His Val Thr Asp  
 305                      310                      315                      320  
 Trp Ile Glu Lys Lys Leu Glu Gln Glu Phe Gln Lys Val Phe Val Met  
                     325                      330                      335  
 Pro Asn Met Asp Asp Val Tyr Ile Thr Ile Met His Ser Ala Met Asp  
                     340                      345                      350  
 Pro Arg Ser Thr Ser Cys Leu Leu Lys Asp Pro Pro Val Glu Ala Ala  
                     355                      360                      365  
 Asp Arg Pro  
 370

&lt;210&gt; 4331

&lt;211&gt; 1355

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 4331

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120

gatttaaatg agcctttgca cctcagtttc cttcagaatg ctgcaaaact atatgctaca

180

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 2100  
 aatgtgtctg gaggggtggg agaggaattc tgtgagcctt ttcatttcgg tgacagaaga  
 2160  
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&lt;210&gt; 4330

&lt;211&gt; 371

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 4330

Met	Ser	Gln	Pro	Lys	Gln	Lys	Glu	Leu	Ala	Gly	Ser	Val	Arg	Gln	Lys
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Met	Leu	Leu	Asp	Tyr	Ser	Val	Tyr	Met	Gly	Arg	Cys	Val	Pro	Gln	Glu
			20					25				30			
Ser	Arg	Ser	Pro	Gln	Arg	Ser	Pro	Leu	Gln	Ser	Ala	Glu	Ser	Ser	Pro
		35					40				45				
Thr	Ala	Gly	Lys	Lys	Leu	Pro	Glu	Val	Pro	Pro	Ser	Glu	Glu	Glu	Glu

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540  
ccaaagcaga aggagctggc aggcagcgtg cggcagaaga tgcttctcga ctacagcgtg  
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720  
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780  
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840  
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1980  
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2040

accgcctgcc accctcactc tccaggaaga gccaccgcgt ggtggccggg atcgtgtggt  
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<210> 4328

<211> 107

<212> PRT

<213> Homo sapiens

<400> 4328

Met	Pro	Ser	Arg	Val	Gln	Ala	Pro	Ser	Trp	Gln	Ala	Arg	Ala	Val	Gly
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Val	Thr	Leu	Leu	Ser	Gln	Arg	Trp	Val	Cys	Pro	Ile	Val	Val	Ser	Arg
		20					25				30				
Ala	Thr	Ser	Ser	Pro	Trp	Leu	Cys	Gly	Leu	Ser	Val	Ser	His	Pro	Gln
		35				40					45				
His	Leu	Asp	Gly	Leu	Arg	Val	Arg	Ala	Lys	Val	Arg	Arg	Pro	Gly	His
	50				55					60					
His	Thr	Ile	Pro	Ala	Thr	Thr	Arg	Trp	Leu	Phe	Leu	Glu	Ser	Glu	Gly
65				70					75					80	
Gly	Arg	Arg	Cys	Leu	Gly	Ser	Trp	Gly	Cys	Leu	Gly	Ser	Glu	Pro	Val
			85					90					95		
Arg	Val	Ser	Pro	Ala	Cys	Pro	Ser	Ile	Ser	Trp					
			100					105							

<210> 4329

<211> 3192

<212> DNA

<213> Homo sapiens

<400> 4329

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 120  
 tgtacctaaa actttggctc gaaagcgaat ctggaataaa aagtacccca tttgtatcga  
 180  
 gcttggctcag caagatgact ttatgtctaa agctcagact gataaggaga cttcagaaga  
 240  
 gaagccgccca gctggaggaa gggaggaccc ttagaagcca ccccgccctc aggaggaaca  
 300  
 agatctagcc agcgagatca gatactctat ctctttggga gaactggccg agaaaaagag  
 360  
 gaatggttta ggagatttat tctggcatct aagctaaagt cggaatcaa gaagtcacgc  
 420

	20		25		30										
Ala	Lys	Arg	Leu	Arg	Phe	Val	Ala	Gly	Val	Ile	Phe	Val	Asp	Glu	Gly
	35		40		45										
Ala	Ala	Cys	Gly	Gln	Ser	Leu	Glu	Glu	Arg	Ser	Lys	Thr	Leu	Ala	Glu
	50		55		60										
Val	Lys	Pro	Ile	Leu	Gln	Ala	Thr	Gly	Phe	Pro	Trp	His	Val	Val	Ala
	65		70		75										80
Leu	Glu	Glu	Val	Phe	Ser	Leu	Pro	Pro	Ser	Val	Leu	Trp	Cys	Ser	Ala
			85		90									95	
Gln	Glu	Leu	Val	Gly	Ser	Glu	Gly	Ala	Tyr	Lys	Ala	Ala	Val	Asp	Ser
			100		105									110	
Phe	Leu	Gln	Gln	Gln	Tyr	Val	Leu	Gly	Ala	Gly	Gly	Gly	Pro	Gly	Pro
			115		120									125	
Thr	Gln	Gly	Glu	Glu	Gln	Pro	Pro	Gln	Pro	Pro	Leu	Asp	Pro	Gln	Asn
			130		135									140	
Leu	Ala	Arg	Pro	Pro	Ala	Pro	Ala	Gln	Thr	Glu	Ala	Leu	Ser	Gln	Leu
			145		150									155	160
Phe	Cys	Ser	Val	Arg	Thr	Leu	Thr	Ala	Lys	Glu	Glu	Leu	Leu	Gln	Thr
			165		170									175	
Leu	Arg	Thr	His	Leu	Ile	Leu	His	Met	Ala	Arg	Ala	His	Gly	Tyr	Ser
			180		185									190	
Lys	Val	Met	Thr	Gly	Asp	Ser	Cys	Thr	Arg	Leu	Ala	Ile	Lys	Leu	Met
			195		200									205	
Thr	Asn	Leu	Ala	Leu	Gly	Arg	Gly	Ala	Phe	Leu	Ala	Trp	Asp	Thr	Gly
			210		215									220	
Phe	Ser	Asp	Glu	Arg	His	Gly	Asp	Val	Val	Val	Val	Arg	Pro	Met	Arg
			225		230									235	240
Asp	His	Thr	Leu	Lys	Glu	Val	Ala	Phe	Tyr	Asn	Arg	Leu	Phe	Ser	Val
			245		250									255	
Pro	Ser	Val	Phe	Thr	Pro	Ala	Val	Asp	Thr	Lys	Ala	Pro	Glu	Lys	Ala
			260		265									270	
Ser	Ile	His	Arg	Leu	Met	Glu	Ala	Phe	Ile	Leu	Arg	Leu	Gln	Thr	Gln
			275		280									285	
Phe	Pro	Ser	Thr	Val	Ser	Thr	Val	Tyr	Arg	Cys	Val	Trp	Val	Cys	Ala
			290		295									300	
Gly	Gly	Ala	Arg	Val	Cys	Ala	Val	Cys	Gly	Cys	Val	Arg	Val	Val	Ser
			305		310									315	320
Ser	Pro	Leu	Val	Leu	Arg	Pro	Gly	Leu	Arg	Val	Glu	Pro	Gln	Pro	Val
			325		330									335	

&lt;210&gt; 4327

&lt;211&gt; 551

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 4327

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caccctcgca ggccacccag acggcagctt ggggaaacct gggaggtccc gtaccctcac

120

tgtgcaggtg gggaaattta gaccctgaaa aagggatgcc ctgagatcac catgagattg

180

aggggcaagc agggctcacc ctgactggct cacttcccag gcaccccat gagcccaggc

240

gaaccggctc atctttccag gcgagaaggt agcgtctggg tcctgggggt ctgactgagc  
 180  
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 240  
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 420  
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 1405

&lt;210&gt; 4326

&lt;211&gt; 336

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 4326

Met Phe Phe Leu Pro Gln Val Leu Leu Ala Trp Ser Gly Gly Pro Ser  
 1 5 10 15  
 Ser Ser Ser Met Val Trp Gln Val Leu Glu Gly Leu Ser Gln Asp Ser



Asn	Ser	Arg	Glu	Ser	Ser	Pro	Leu	Pro	Lys	Glu	Val	Asn	Asp	Ser	Pro
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Arg	Ala	Ala	Asp	Lys	Ser	Pro	Glu	Ser	Gln	Asn	Leu	Ile	Asp	Gly	Thr
210						215					220				
Lys	Lys	Pro	Ser	Leu	Lys	Gln	Pro	Asp	Ser	Pro	Arg	Ser	Ile	Ser	Ser
225					230					235				240	
Glu	Asn	Ser	Ser	Lys	Gly	Ser	Pro	Ser	Ser	Pro	Ala	Gly	Ser	Thr	Pro
				245					250					255	
Ala	Ile	Pro	Lys	Val	Arg	Ile	Lys	Thr	Ile	Lys	Thr	Ser	Ser	Gly	Glu
			260					265					270		
Ile	Lys	Arg	Thr	Val	Thr	Arg	Val	Leu	Pro	Glu	Val	Asp	Leu	Asp	Ser
		275					280					285			
Gly	Lys	Lys	Pro	Ser	Glu	Gln	Thr	Ala	Ser	Val	Met	Ala	Ser	Val	Thr
290					295					300					
Ser	Leu	Leu	Ser	Ser	Pro	Ala	Ser	Ala	Ala	Val	Leu	Ser	Ser	Pro	Pro
305					310					315				320	
Arg	Ala	Pro	Leu	Gln	Ser	Ala	Val	Val	Thr	Asn	Ala	Val	Ser	Pro	Ala
				325					330					335	
Glu	Leu	Thr	Pro	Lys	Gln	Val	Thr	Ile	Lys	Pro	Val	Ala	Thr	Ala	Phe
			340					345					350		
Leu	Pro	Val	Ser	Ala	Val	Lys	Thr	Ala	Gly	Ser	Gln	Val	Ile	Asn	Leu
		355					360					365			
Lys	Leu	Ala	Asn	Asn	Thr	Thr	Val	Lys	Ala	Thr	Val	Ile	Ser	Ala	Ala
370					375					380					
Ser	Val	Gln	Ser	Ala	Ser	Ser	Ala	Ile	Ile	Lys	Ala	Ala	Asn	Ala	Ile
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Gln	Gln	Gln	Thr	Val	Val	Val	Pro	Ala	Ser	Ser	Leu	Ala	Asn	Ala	Lys
			405					410						415	
Leu	Val	Pro	Lys	Thr	Val	His	Leu	Ala	Asn	Leu	Asn	Leu	Leu	Pro	Gln
			420					425					430		
Gly	Ala	Gln	Ala	Thr	Ser	Glu	Leu	Arg	Gln	Val	Leu	Thr	Lys	Pro	Gln
		435					440					445			
Gln	Gln	Ile	Lys	Gln	Ala	Ile	Ile	Asn	Ala	Ala	Ala	Ser	Gln	Pro	Pro
		450				455				460					
Lys	Lys	Val	Ser	Arg	Val	Gln	Val	Val	Ser	Ser	Leu	Gln	Ser	Ser	Val
465				470						475				480	
Val	Glu	Ala	Phe	Asn	Lys	Val	Leu	Ser	Ser	Val	Asn	Pro	Val	Pro	Val
			485					490					495		
Tyr	Ile	Pro	Asn	Leu	Ser	Pro	Pro	Ala	Asn	Ala	Gly	Ile	Thr	Leu	Pro
			500					505					510		

Thr Arg

&lt;210&gt; 4325

&lt;211&gt; 1405

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 4325

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120

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 1542

&lt;210&gt; 4324

&lt;211&gt; 514

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 4324

Xaa	Tyr	Ser	Lys	Asp	Gly	Ala	Lys	Ser	Leu	Lys	Gly	Asp	Val	Pro	Ala
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Ser	Glu	Val	Thr	Leu	Lys	Asp	Ser	Thr	Phe	Ser	Gln	Phe	Ser	Pro	Ile
			20						25					30	
Ser	Ser	Ala	Glu	Glu	Phe	Asp	Asp	Asp	Glu	Lys	Ile	Glu	Val	Asp	Asp
		35					40						45		
Pro	Pro	Asp	Lys	Glu	Asp	Met	Arg	Ser	Ser	Phe	Arg	Ser	Asn	Val	Leu
		50				55					60				
Thr	Gly	Ser	Ala	Pro	Gln	Gln	Asp	Tyr	Asp	Lys	Leu	Lys	Ala	Leu	Gly
65					70					75				80	
Gly	Glu	Asn	Ser	Ser	Lys	Thr	Gly	Leu	Ser	Thr	Ser	Gly	Asn	Val	Glu
			85						90					95	
Lys	Asn	Lys	Ala	Val	Lys	Arg	Glu	Thr	Glu	Ala	Ser	Ser	Ile	Asn	Leu
			100						105				110		
Ser	Val	Tyr	Glu	Pro	Phe	Lys	Val	Arg	Lys	Ala	Glu	Asp	Lys	Leu	Lys
		115					120					125			
Glu	Ser	Ser	Asp	Lys	Val	Leu	Glu	Asn	Arg	Val	Leu	Asp	Gly	Lys	Leu
		130				135					140				
Ser	Ser	Glu	Lys	Asn	Asp	Thr	Ser	Leu	Pro	Ser	Val	Ala	Pro	Ser	Lys
145				150						155				160	
Thr	Lys	Ser	Ser	Ser	Lys	Leu	Ser	Ser	Cys	Ile	Ala	Ala	Ile	Ala	Ala
			165						170					175	
Leu	Ser	Ala	Lys	Lys	Ala	Ala	Ser	Asp	Ser	Cys	Lys	Glu	Pro	Val	Ala

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 <211> 85  
 <212> PRT  
 <213> Homo sapiens

<400> 4322  
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 Asn Ala Trp Val Pro Pro Arg Ala Ala Phe His Arg Asp Ala Gly Pro  
 35 40 45  
 Ala Val Ala Gly Pro Cys Arg Cys Gly Gly Leu Leu Thr Lys Glu Pro  
 50 55 60  
 Gly Leu Ala Ala Trp Asn Asn Leu Gln Val Gly Val Leu Arg Gly Leu  
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 Trp Gln Val Leu Gly  
 85

<210> 4323  
 <211> 1542  
 <212> DNA  
 <213> Homo sapiens

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 120  
 gacgagaaga ttgaggtgga tgacccccct gacaaggagg acatgcgatc aagcttcagg  
 180  
 tcgaatgtgt tgacgggggc ggctccccag caggactacg ataagctgaa ggcactcggg  
 240  
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 300  
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 360  
 agaaaagcag aggataaatt gaaggaaagc tctgacaagg tgctggaaaa cagagtccta  
 420  
 gatgggaagc tgagctccga gaagaatgac accagcctcc ccagcgttgc gccatcaaag  
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 540  
 aaggcggctt cagactcctg caaagaacca gtggccaatt cgagggaatc ctccccgtta  
 600  
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 660  
 atcgacggga ccaaaaaacc atccctgaag caaccggata gtcccagaag catctcaagt  
 720  
 gagaacagca gcaaaggatc cccgtctctc cccgcggggc ccacaccagc aatccccaaa  
 780  
 gtccgcataa aaaccattaa gacatcttct ggggaaatca agagaacagt gaccagggtg  
 840

ccaggccgta gccacagcaa ggaccgaacc ctgggaaaac cagacagcct tttagtgcct  
120  
gcagtcgcaa gtgactcttg caataatagc atctcactcc tatctgaaaa gttgacaagc  
180  
agctgttccc cccatcatat caagagaagt gtagtggaag ctatgcaacg ccaagctcgg  
240  
aaaatgtgca attacgacaa aatcttggcc acaaagaaaa acctagacca tgtcaataaa  
300  
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360  
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388

<210> 4320

<211> 129

<212> PRT

<213> Homo sapiens

<400> 4320

Xaa	Met	Glu	Lys	Ser	Ile	Asp	Ala	Val	Ile	Ala	Thr	Ala	Ser	Ala	Pro
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Pro	Ser	Ser	Ser	Pro	Gly	Arg	Ser	His	Ser	Lys	Asp	Arg	Thr	Leu	Gly
		20					25					30			
Lys	Pro	Asp	Ser	Leu	Leu	Val	Pro	Ala	Val	Ala	Ser	Asp	Ser	Cys	Asn
		35				40					45				
Asn	Ser	Ile	Ser	Leu	Leu	Ser	Glu	Lys	Leu	Thr	Ser	Ser	Cys	Ser	Pro
	50					55				60					
His	His	Ile	Lys	Arg	Ser	Val	Val	Glu	Ala	Met	Gln	Arg	Gln	Ala	Arg
65				70					75				80		
Lys	Met	Cys	Asn	Tyr	Asp	Lys	Ile	Leu	Ala	Thr	Lys	Lys	Asn	Leu	Asp
			85					90					95		
His	Val	Asn	Lys	Ile	Leu	Lys	Ala	Lys	Lys	Leu	Gln	Arg	Gln	Ala	Arg
		100				105					110				
Thr	Gly	Asn	Asn	Phe	Val	Lys	Arg	Arg	Pro	Gly	Arg	Pro	Arg	Ser	Glu
		115				120					125				

Arg

<210> 4321

<211> 278

<212> DNA

<213> Homo sapiens

<400> 4321

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120  
cgccccggtg gaaggcagcc ctgggcggaa cccaggcggt taacgggtca ctaggcagcc  
180  
ccagatctgg ggaacagatg agcacgtggg gagctggagt gagctgagca gaagttttgt  
240  
gcccgctgc ccccatcccc tccaggccac gttttaga  
278

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<210> 4318
<211> 239
<212> PRT
<213> Homo sapiens
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<210> 4319
<211> 388
<212> DNA
<213> Homo sapiens
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3514

<210> 4316  
 <211> 169  
 <212> PRT  
 <213> Homo sapiens

<400> 4316  
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 His Arg Gln Ala Gln Ser Asp Asp His Val Lys Thr Gln Gly Arg Asp  
 20 25 30  
 Gly His Leu Pro Pro Arg His Gly His Leu Pro Ser Lys Pro Trp Ser  
 35 40 45  
 Pro Ser Pro Ser His Ser His Leu Pro Ser Lys Pro Pro Ser Pro Thr  
 50 55 60  
 Ile Gln Ala Met Ala Thr Tyr Leu Pro Ser His Gly His Leu Pro Ala  
 65 70 75 80  
 Lys Pro Trp Ser Pro Thr His Gln Val Met Val Ala Tyr His Pro Arg  
 85 90 95  
 Ser Arg Pro Gly Thr Asp Pro Ser Pro Glu Pro Ser Val Gly Ala Asn  
 100 105 110  
 Pro Ala Asp Thr Leu Ile Ser Asp Phe Lys Pro Pro Glu Leu Trp Asp  
 115 120 125  
 Asn Pro Ser Leu Ser Phe Asn Pro Pro Ser Met Trp Ser Leu Val Thr  
 130 135 140  
 Val Ala Leu Ala Ser Glu Pro Thr Arg Ala Leu Leu Gln Ser Pro Gly  
 145 150 155 160  
 Ser Gly Val Val Leu Val Arg Lys Phe  
 165

<210> 4317  
 <211> 744  
 <212> DNA  
 <213> Homo sapiens

<400> 4317  
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 tcccatgccg aaaacataact ccagatattt aatgaatttc gtgatagccg cttattcaca  
 120  
 gatgttatca tttgggtgga aggaaaagaa tttccttgcc atagagctgt gctctcagcc  
 180  
 tgtagcagct acttcagagc tatgttttgt aatgaccaca gggaaagccg agaaatgttg  
 240  
 gttgagatca atggtatttt agctgaagct atggaatggt ttttgcagta tgtttatact  
 300  
 ggaaagggtga agatcactac agagaatgta cagtatctct ttgagacatc aagcctcttt  
 360  
 cagattagtg ttctccgtga tgcattgtgcc aagttcttgg aggagcaact tgatccttgt  
 420  
 aattgcttag gaatccagcg ctttctgat acccattcac tcaaaacact cttcacaaaa  
 480  
 tgcaaaaatt ttgcgttaca gacttttgag gatgtatccc agcacgaaga atttcttgag  
 540

gtttacttct ctgcacgggg gactcacccc aagaccattt ccagcagctt cccaggtgat  
840  
gtggtgcccc aaggctgggc ttgacagctg tggcccagct ccttagtgct gcccaggaga  
900  
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936

<210> 4314

<211> 110

<212> PRT

<213> Homo sapiens

<400> 4314

Met	Ser	Ser	Leu	Leu	Leu	Pro	Ser	Gln	Ser	Cys	Asp	Pro	Val	Met	Ser
1			5					10					15		
Thr	Arg	Met	Ala	Leu	Trp	Ser	Leu	Glu	His	Pro	Ser	Cys	Cys	Arg	Val
			20				25					30			
Leu	Gln	Pro	His	Pro	Phe	Ser	Thr	Gly	Pro	Trp	Tyr	Pro	Gly	Ser	Ser
		35					40				45				
Leu	Ser	Ser	Ala	Thr	Asp	Leu	Cys	Ala	Leu	Val	Tyr	Phe	Ser	Ala	Arg
	50					55				60					
Gly	Thr	His	Pro	Lys	Thr	Ile	Ser	Ser	Ser	Phe	Pro	Gly	Asp	Val	Val
65				70					75					80	
Pro	Gln	Gly	Trp	Ala	Leu	Gln	Leu	Trp	Pro	Ser	Ser	Leu	Val	Leu	Pro
			85					90					95		
Arg	Arg	His	Gln	Ala	Ala	Gln	Asn	Glu	Val	Thr	Ala	Gly	Asn		
			100					105					110		

<210> 4315

<211> 573

<212> DNA

<213> Homo sapiens

<400> 4315

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120  
cacctaccat ccaagccatg gtcaccttca ccaagccaca gtcattctacc atccaagcca  
180  
ccgtcaccta ccatccaagc catggccacc tacctgcca gccatggcca cctaccggcc  
240  
aagccatggt cacctaccga ccaagtcatt gtcgcctacc atccaaggag caggcctgga  
300  
acagatcctt cccagagcc ctcatgtagga gccaaccttg ctgacacctt gatctcagac  
360  
ttcaagcctc cagaactgtg ggacaatcct tcatgtcat ttaatccacc cagcatgtgg  
420  
tctcttgta cagttgcatt agccagtga cctaccggg cccttctgca gtcgcctggc  
480  
tcaggagtgg ttctggtcag gaagttctga ggccaggcag gatcgggaca ctccctggaa  
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573

<213> Homo sapiens

<400> 4312

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Xaa Arg Val Lys Gly Ile Arg Pro Trp Asn Cys Gln Arg Cys Phe Ala
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His Tyr Asp Val Gln Ser Ile Leu Phe Asn Ile Asn Glu Ala Met Ala
          20          25          30
Thr Arg Ala Asn Val Gly Lys Arg Lys Asn Ile Thr Thr Gly Ala Ser
          35          40          45
Ala Ala Ser Gln Thr Gln Met Pro Thr Gly Gln Thr Gly Asn Cys Glu
          50          55          60
Ser Pro Leu Gly Ser Lys Glu Asp Leu Asn Ser Lys Glu Asn Leu Asp
          65          70          75          80
Ala Asp Glu Gly Asp Gly Lys Ser Asn Asp Leu Val Leu Ser Cys Pro
          85          90          95
Tyr Phe Arg Asn Glu Thr Gly Gly Glu Gly Asp Arg Arg Ile Ala Leu
          100         105         110
Ser Arg Ala Asn Ser Ser Ser Phe Ser Ser Gly Glu Ser Cys Ser Phe
          115         120         125
Glu Ser Ser Leu Ser Ser His Cys Thr Asn Ala Gly Val Ser Val Leu
          130         135         140

```

<210> 4313

<211> 936

<212> DNA

<213> Homo sapiens

<400> 4313

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120
attcagtatc caaccatcct ctccattctc ctctggacct caccactctc agagctgctt
180
gtcctggcag aatctacagt tcaccccaac tctatgcctt acccctccca acccaacagc
240
atttgagtt tgcaaaatat acagacccaa gtctgaggg gactgaggac atgatgctgg
300
gcccaggtct cctgctcagg gcttctctcc aatgccagcc ctgccactcc ttctcacc
360
tccttgagc ctctctgct gcttgtctat cccaacggcc ctgctcccct ccttctctgc
420
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480
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540
ctcaaaccat tccaagaag agggacctca gctggcaatc tggaaacctg gccaggtct
600
gggcagatgt cttcacttct cctaccttcc cagtcttctg atcctgtgat gagcaccagg
660
atggccctgt ggtccctaga gcaccttca tgctgtaggg tctgcagcc ccactcttcc
720
tctactgggc cctggatatc tggtctctct ctgagctctg ccactgatct ctgtgcctta
780

```



```

385          390          395          400
Lys His Leu Glu Glu Lys Met Arg His Leu Leu His Val Leu Lys
          405          410          415
Val Asp Leu Gly Cys Thr Ser Glu Glu Asn Ser Val Lys Gln Asn Asp
          420          425          430
Val Asp Met Leu Asn Val Phe Asp Phe Glu Lys Ala Gly Asn Ser Glu
          435          440          445
Pro Asn Glu Leu Lys Asn Glu Ser Glu Val Thr Ile Gln Gln Glu Arg
          450          455          460
Gln Gln Tyr Gln Lys Ala Leu Asp Met Leu Leu Ser Ala Pro Lys Asp
465          470          475          480
Glu Asn Glu Ile Phe Pro Ser Pro Thr Glu Phe Phe Met Pro Ile Tyr
          485          490          495
Lys Ser Lys His Ser Glu Gly Val Ile Ile Gln Gln Val Asn Asp Glu
          500          505          510
Thr Asn Leu Glu Thr Ser Thr Leu Asp Glu Asn His Pro Ser Ile Ser
          515          520          525
Asp Ser Leu Thr Asp Arg Glu Thr Ser Val Asn Val Ile Glu Gly Asp
          530          535          540
Ser Asp Pro Glu Lys Val Glu Ile Ser Asn Gly Leu Cys Gly Leu Asn
545          550          555          560
Thr Ser Pro Ser Gln Ser Val Gln Phe Ser Ser Val Lys Gly Asp Asn
          565          570          575
Asn His Asp Met Glu Leu Ser Thr Leu Lys Ile Met Glu Met Ser Ile
          580          585          590
Glu Asp Cys Pro Leu Asp Val
          595

```

&lt;210&gt; 4311

&lt;211&gt; 432

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 4311

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nnacgcgtga agggcattcg cccttggaat tgtcagcgat gttttgcaca ttatgatgtc
60

```

```

cagagcattt tgtttaatat caacgaagcc atggctacga gggctaattgt ggggaaaagg
120

```

```

aaaaacataa ccaactggggc atctgcagca tcccagactc agatgcctac gggccagaca
180

```

```

ggcaactgtg agtccccctt agggagcaag gaggacctca actccaaaga gaacctggat
240

```

```

gccgatgagg gagatgggaa aagtaacgac ctgcctctta gttgtcctta ctttagaaat
300

```

```

gagactggag gggaaggcga caggcggatt gcgtctctc gagccaactc atcctctttc
360

```

```

agttctgggg aaagctgctc ttctgaatcg tcaactcagct ctcaactgcac aaatgcagg
420

```

```

gtctccgtct tg

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432

&lt;210&gt; 4312

&lt;211&gt; 144

&lt;212&gt; PRT

&lt;211&gt; 599

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 4310

```

Met Asn Gly Ser Arg Arg Val Arg Ala Thr Ser Val Leu Pro Arg Tyr
 1              5              10              15
Gly Pro Pro Cys Leu Phe Lys Gly His Leu Ser Thr Lys Ser Asn Ala
      20              25              30
Phe Cys Thr Asp Ser Ser Ser Leu Arg Leu Ser Thr Leu Gln Leu Val
      35              40              45
Lys Asn His Met Ala Val His Tyr Asn Lys Ile Leu Ser Ala Lys Ala
      50              55              60
Ala Val Asp Cys Ser Val Pro Val Ser Val Ser Thr Ser Ile Lys Tyr
      65              70              75              80
Ala Asp Gln Gln Arg Arg Glu Lys Leu Lys Lys Glu Leu Ala Gln Cys
      85              90              95
Glu Lys Glu Phe Lys Leu Thr Lys Thr Ala Met Arg Ala Asn Tyr Lys
      100             105             110
Asn Asn Ser Lys Ser Leu Phe Asn Thr Leu Gln Lys Pro Ser Gly Glu
      115             120             125
Pro Gln Ile Glu Asp Asp Met Leu Lys Glu Glu Met Asn Gly Phe Ser
      130             135             140
Ser Phe Ala Arg Ser Leu Val Pro Ser Ser Glu Arg Leu His Leu Ser
      145             150             155             160
Leu His Lys Ser Ser Lys Val Ile Thr Asn Gly Pro Glu Lys Asn Ser
      165             170             175
Ser Ser Ser Pro Ser Ser Val Asp Tyr Ala Ala Ser Gly Pro Arg Lys
      180             185             190
Leu Ser Ser Gly Ala Leu Tyr Gly Arg Arg Pro Arg Ser Thr Phe Pro
      195             200             205
Asn Ser His Arg Phe Gln Leu Val Ile Ser Lys Ala Pro Ser Gly Asp
      210             215             220
Leu Leu Asp Lys His Ser Glu Leu Phe Ser Asn Lys Gln Leu Pro Phe
      225             230             235             240
Thr Pro Arg Thr Leu Lys Thr Glu Ala Lys Ser Phe Leu Ser Gln Tyr
      245             250             255
Arg Tyr Tyr Thr Pro Ala Lys Arg Lys Lys Asp Phe Thr Asp Gln Arg
      260             265             270
Ile Glu Ala Glu Thr Gln Thr Glu Leu Ser Phe Lys Ser Glu Leu Gly
      275             280             285
Thr Ala Glu Thr Lys Asn Met Thr Asp Ser Glu Met Asn Ile Lys Gln
      290             295             300
Ala Ser Asn Cys Val Thr Tyr Asp Ala Lys Glu Lys Ile Ala Pro Leu
      305             310             315             320
Pro Leu Glu Gly His Asp Ser Thr Trp Asp Glu Ile Lys Asp Asp Ala
      325             330             335
Leu Gln His Ser Ser Pro Arg Ala Met Cys Gln Tyr Ser Leu Lys Pro
      340             345             350
Pro Ser Thr Arg Lys Ile Tyr Ser Asp Glu Glu Glu Leu Leu Tyr Leu
      355             360             365
Ser Phe Ile Glu Asp Val Thr Asp Glu Ile Leu Lys Leu Gly Leu Phe
      370             375             380
Ser Asn Arg Phe Leu Glu Arg Leu Phe Glu Arg His Ile Lys Gln Asn

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540  
catatcaaca tcattttgct ttaccgagtt ttectccgat gtgcagccta agtctacttt  
600  
caggacatgc agcaggtggc gcattttttc ctctccaaa tgtttatttt gttttatatg  
660  
tcgctcgaac agtcgttcta aaaacctgtt tgaaaataaa ccaagtttca aaatttcac  
720  
tgttacatct tcaatgaaac tcagatacaa cagttcttct tcatcagagt agattttacg  
780  
agttgaaggg ggcttcaggg aatactgaca cattgccctt ggtgaggaat gctgaagagc  
840  
atcatcctta atctcatccc atgttgagtc atgcccttct aaaggtaaag gagctatttt  
900  
ttctttggca tcatatgtca cacaattaga tgcttgcttt atgttcattt ctgaatctgt  
960  
catgttttta gtctcagctg tccccaactc agatttaaag cttaattcag tctgggttcc  
1020  
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1080  
ctgtgacagg aaagattttg cttctgtttt taaagtgcga ggagtgaatg gcaattgttt  
1140  
gttagaaaag agttcagaat gtttatccaa aagatcccca ctgggtgctt tcgaaatgac  
1200  
taactgaaac cgggtggaat ttgggaatgt gcttctgggc cttctgccat acagggtccc  
1260  
agagctcagt ttccggggcc cggaggctgc ataatccaca ctggacgggg aggaactgga  
1320  
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1380  
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1440  
catgtcatcc tcaatttgcg gttcgctga gggcttttgt aaggtattaa aaagtgactt  
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1560  
ttgtgctaatt tcctttttga gtttctctct tcgttggttg tctgcatact ttatgctggt  
1620  
actcacgctt actggaaccg agcagcttac tgcagctttg gctgaaagga ttttattata  
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gtgaacagcc atgtgattct tgaccagctg gagagtgctt agtctgagag aagaggagtc  
1740  
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1800  
tctgggaagg acagaggttg ctctgactct ccggctgcca ttcattgctta gtcctcttgc  
1860  
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1920  
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1928

&lt;210&gt; 4310

<210> 4308  
 <211> 200  
 <212> PRT  
 <213> Homo sapiens

<400> 4308  
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 20 25 30  
 Ala Pro Gly Ala Arg Cys His Gly Asp Ala Pro Gly Ser Leu Ala Ala  
 35 40 45  
 Arg Cys Gly Cys Gly Val Gln Gly Val Gln Gly Thr Ala Arg Cys Ala  
 50 55 60  
 Ser Cys Ser Cys Cys His Ala Ser Leu Cys Pro Ala Gly Gly Cys Gly  
 65 70 75 80  
 Trp Gly Cys Ser Phe Leu Thr Gly Xaa Cys Gly Gly Ser Gly Ala Xaa  
 85 90 95  
 Cys Gly Asp Cys Glu Gly Phe Asp Val His Ile Met Asp Asp Met Ile  
 100 105 110  
 Lys Val Gly Arg Ala Thr Leu Cys Ile Val Pro Pro Thr Cys Ser Cys  
 115 120 125  
 Ile Ala Gly Leu Ser Gln Gly Pro Ser Leu Gly Ser Thr Gly Ser Ser  
 130 135 140  
 Val Gly Gly Ser Glu Val Arg Cys Cys His Phe Val Trp Phe Asn Met  
 145 150 155 160  
 Ser Ile Ala Trp Tyr Gln Pro Cys Ser Trp Leu Arg Ala Val Thr Leu  
 165 170 175  
 Cys Gln Asn Leu His Trp Ala Cys Thr Ser Cys His Cys Asn Cys Pro  
 180 185 190  
 Cys Gln Cys Pro Gln Leu Leu Phe  
 195 200

<210> 4309  
 <211> 1928  
 <212> DNA  
 <213> Homo sapiens

<400> 4309  
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 120  
 gtcgcctttg aactggaga actgaacaga ttgggagggt gatgtgttaa gaccacataa  
 180  
 tccatttgaa atctcaacct tttcagggtc actatcacct tcaatgacat tcacagaagt  
 240  
 ttcccgatct gttaaactgt ctgaaatact tggatgattt tcatccaaag ttgaagtttc  
 300  
 aagatttggt tcatcattca cctgttgaat tataaccctt tctgaatgct ttgatttata  
 360  
 aataggcatg aaaaattcag ttggtgaagg gaatatctcg ttctcatcct ttggtgccga  
 420

930	935	940
Ser His Ala Ser Leu Pro Asn Ile Trp Thr Ala Trp Gln Ala Ile Thr		
945	950	955
Pro Leu Val Glu Glu Leu Asn Val Leu Leu Gln Glu Trp Pro Gly Leu		960
	965	970
His Tyr Thr Val His Ile Leu Cys Ser Lys Cys Leu Lys Arg Gly Ser		975
	980	985
Pro Asn Pro His Ala Phe Pro Gly Glu Leu Leu Ser Gln Pro Arg Pro		990
	995	1000
Glu Gly Val Ala Glu Ile Ile Cys Pro Lys Asn Gly Ser Glu Arg Val		1005
	1010	1015
Asn Val Ala Leu Val Tyr Pro Pro Thr Pro Thr Val Ile Ser Pro Cys		1020
1025	1030	1035
Ser Lys Lys Asn Val Gly Glu Lys His Arg Asn Gln		1040
	1045	1050

&lt;210&gt; 4307

&lt;211&gt; 947

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 4307

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 60  
 tgtgtgactg ccaggtcac ctgctctgga accggcctcg gtttgagag atcaatgacc  
 120  
 aggacagaac tgatcgatac gtccaggctc tgaggaccgt ctctctcctc ctggcgagc  
 180  
 cgttcttcac taccagcctg ctgccgtggc acaacctcta cttctggtac gtgcggacgc  
 240  
 tgtggaccag cacctggggc caggtgccat ggtgatgcc caggcagcct cgctgcacgc  
 300  
 tgtggttggt gagttcaggg tgtgcaggga acagcaagat gtgcctcttg ttcttgctgc  
 360  
 cacgttccc tgtgtcctgc gggcgggtgt ggtatgggct gctcctcct cacaggancc  
 420  
 tgtggcggat ccggagccnc ctgtggtgac tgcaaggct tcgacgtgca catcatggat  
 480  
 gacatgatta aggtaggcag ggccacactc tgcatagtcc ccccgacctg ctctgtatc  
 540  
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 600  
 gtcagggtgt gccattttgt gtggttcaac atgagcattg cttggtacca gccctgttct  
 660  
 tggtccgtg ctgtcacct gtgtcagaat ctccactggg cctgcacgtc ctgtcattgc  
 720  
 aactgcccct gccagtgcc acagcttctt ttctagtggg gctgacttcc cagaggccat  
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 900  
 agaaccatgg gctgtcctga cagcgccagt ggtccttggg ttcattga  
 947

500	505	510
Pro Thr Thr Val Gly Ser Phe Leu His Arg Val Gly Ala Arg Val Pro		
515	520	525
Asn Ala Val Val Cys Ile Val Gly Thr His Ala Asp Leu Cys Gly Glu		
530	535	540
Arg Glu Leu Glu Glu Lys Cys Leu Asp Ile His Arg Gln Ile Ala Leu		
545	550	555
Gln Glu Lys His Asp Ala Glu Gly Leu Ser Arg Leu Ala Lys Val Val		
565	570	575
Asp Glu Ala Leu Ala Arg Asp Phe Glu Leu Arg Ser Ala Ser Pro His		
580	585	590
Ala Ala Tyr Tyr Gly Val Ser Asp Lys Asn Leu Arg Arg Arg Lys Ala		
595	600	605
His Phe Gln Tyr Leu Leu Asn His Arg Leu Gln Ile Leu Ser Pro Val		
610	615	620
Leu Pro Val Ser Cys Arg Asp Pro Arg His Leu Arg Arg Leu Arg Asp		
625	630	635
Lys Leu Leu Ser Val Ala Glu His Arg Glu Ile Phe Pro Asn Leu His		
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Arg Val Leu Pro Arg Ser Trp Gln Val Leu Glu Glu Leu His Phe Gln		
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Pro Pro Gln Ala Gln Arg Leu Trp Leu Ser Trp Trp Asp Ser Ala Arg		
675	680	685
Leu Gly Leu Gln Ala Gly Leu Thr Glu Asp Arg Leu Gln Ser Ala Leu		
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Ser Tyr Leu His Glu Ser Gly Lys Leu Leu Tyr Phe Glu Asp Ser Pro		
705	710	715
Ala Leu Lys Glu His Val Phe His Asn Leu Thr Arg Leu Ile Asp Ile		
725	730	735
Leu Asn Val Phe Phe Gln Arg Asp Pro Ser Leu Leu Leu His Lys Leu		
740	745	750
Leu Leu Gly Thr Ser Gly Glu Gly Lys Ala Glu Gly Glu Ser Ser Pro		
755	760	765
Pro Met Ala Arg Ser Thr Pro Ser Gln Glu Leu Leu Arg Ala Thr Gln		
770	775	780
Leu His Gln Tyr Val Glu Gly Phe Leu Leu His Gly Leu Leu Pro Ala		
785	790	795
His Val Ile Arg Leu Leu Leu Lys Pro His Val Gln Ala Gln Gln Asp		
805	810	815
Leu Gln Leu Leu Leu Glu Leu Leu Glu Lys Met Gly Leu Cys Tyr Cys		
820	825	830
Leu Asn Lys Pro Lys Gly Lys Pro Leu Asn Gly Ser Thr Ala Trp Tyr		
835	840	845
Lys Phe Pro Cys Tyr Val Gln Asn Glu Val Pro His Ala Glu Ala Trp		
850	855	860
Ile Asn Gly Thr Asn Leu Ala Gly Gln Ser Phe Val Ala Glu Gln Leu		
865	870	875
Gln Ile Glu Tyr Ser Phe Pro Phe Thr Phe Pro Pro Gly Leu Phe Ala		
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Arg Tyr Ser Val Gln Ile Asn Ser His Val Val His Arg Ser Asp Gly		
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Lys Phe Gln Ile Phe Ala Tyr Arg Gly Lys Val Pro Val Val Val Ser		
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Tyr Arg Pro Ala Arg Gly Val Leu Gln Pro Asp Thr Leu Ser Ile Ala		

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Asn	Gln	Leu	Pro	Ala	Leu	Pro	Ala	Gln	Leu	Gly	Ala	Leu	Ala	His
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Leu	Thr	Ala	Phe	Pro	Arg	Gln	Leu	Leu	Gln	Leu	Val	Ala	Leu	Glu
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Gln	Arg	Leu	Lys	Met	Leu	Asn	Leu	Ser	Ser	Asn	Leu	Phe	Glu	Glu
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Pro	Ala	Ala	Leu	Leu	Pro	Leu	Ala	Gly	Leu	Glu	Glu	Leu	Tyr	Leu
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Gln	Ile	Ala	Val	Leu	Pro	Asp	His	Phe	Gly	Gln	Leu	Ser	Arg	Val
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Pro	Ser	Pro	Pro	Pro	Val	Ser	Lys	Gly	Ile	Glu	Val	Thr	Ser	Trp
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Asp	Glu	Ser	Tyr	Glu	Val	Ile	Gln	Pro	Phe	Phe	Leu	Ser	Pro	Gly
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Leu	Tyr	Val	Leu	Val	Val	Asn	Leu	Ala	Thr	Tyr	Glu	Pro	Arg	His

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&lt;210&gt; 4306

&lt;211&gt; 1052

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 4306

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			20					25					30		
Thr	Leu	Thr	Ala	Ala	Gly	Ala	Cys	Pro	Gly	Ala	Gly	Ala	Asp	Ala	Leu
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Gly Asp Pro Arg Thr Arg Ala Ser Asp Pro Gln Ser Pro Pro Gln Val		110
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Arg Thr Ala Ser Leu Val Thr Arg Gln Met Gln Glu His Glu Gln Asp		140
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Ser Glu Leu Arg Glu Gln Met Ser Gly Tyr Lys Arg Met Arg Arg Gln		155
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His Gln Lys Gln Leu Met Thr Leu Glu Asn Lys Leu Lys Ala Glu Met		170
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Asp Glu His Arg Leu Arg Leu Asp Lys Asp Leu Glu Thr Gln Arg Asn		185
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Asn Phe Ala Ala Glu Met Glu Lys Leu Ile Lys Lys His Gln Ala Ala		200
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Met Glu Lys Glu Ala Lys Val Met Ser Asn Glu Glu Lys Lys Phe Gln		215
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&lt;210&gt; 4305

&lt;211&gt; 3400

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 4305

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<210> 4302

<211> 717

<212> PRT

<213> Homo sapiens

<400> 4302

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Glu	Gly	Val	Gly	Gly	Gly	Ala	Ser	Ala	Leu	Thr	Ser	Gly	Ile	Ala	Ser
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Ser	Pro	Asp	Tyr	Glu	Phe	Asn	Val	Trp	Thr	Arg	Pro	Asp	Cys	Ala	Glu
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Thr	Glu	Phe	Glu	Asn	Gly	Asn	Arg	Ser	Trp	Phe	Tyr	Phe	Ser	Val	Arg
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Lys	Gln	Ser	Lys	Leu	Tyr	Ser	Gln	Gly	Met	Ala	Pro	Phe	Val	Arg	Thr
		100					105						110		
Leu	Pro	Thr	Arg	Pro	Arg	Trp	Glu	Arg	Ile	Arg	Asp	Arg	Pro	Thr	Phe
		115					120					125			
Glu	Met	Thr	Glu	Thr	Gln	Phe	Val	Leu	Ser	Phe	Val	His	Arg	Phe	Val
	130					135					140				
Glu	Gly	Arg	Gly	Ala	Thr	Thr	Phe	Phe	Ala	Phe	Cys	Tyr	Pro	Phe	Ser
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Tyr	Ser	Asp	Cys	Gln	Glu	Leu	Leu	Asn	Gln	Leu	Asp	Gln	Arg	Phe	Pro
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Glu	Asn	His	Pro	Thr	His	Ser	Ser	Pro	Leu	Asp	Thr	Ile	Tyr	Tyr	His
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Arg	Glu	Leu	Leu	Cys	Tyr	Ser	Leu	Asp	Gly	Leu	Arg	Val	Asp	Leu	Leu
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Thr	Ile	Thr	Ser	Cys	His	Gly	Leu	Arg	Glu	Asp	Arg	Glu	Pro	Arg	Leu
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&lt;210&gt; 4300

&lt;211&gt; 84

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 4300

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&lt;210&gt; 4301

&lt;211&gt; 2429

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 4301

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 Ser Phe Pro Thr His Lys Arg Lys Ala Lys Val Ser Ile Ile Ser Gln  
 195 200 205  
 Pro Gln Lys Thr Ile Lys Val Ala Glu Leu Pro Gln Ala Asp Lys Val  
 210 215 220  
 Glu Ser Thr Thr Asp Ser His Phe Pro Arg Gln Asp Gln Leu Pro Ser  
 225 230 235 240  
 Phe Pro Lys Asn Cys Thr Leu Glu Leu Lys Gly Leu Phe His Phe Glu  
 245 250 255  
 Glu Gly Ile Gln Lys Leu Tyr Gln Cys Asn Gly Ile Ala Trp Lys Ala  
 260 265 270  
 Trp Ser Pro Gln Thr Lys Asp Val Glu Asp Lys Ser Cys Pro Ala Gly  
 275 280 285  
 Trp His Gln His Ser Gly Tyr Cys His Ile Leu Ile Thr Glu Gln Lys  
 290 295 300  
 Gly Thr Trp Asn Ala Ala Ala Gln Ala Cys Arg Glu Gln Tyr Leu Gly  
 305 310 315 320  
 Asn Leu Val Thr Val Phe Ser Arg Gln His Met Arg Trp Leu Trp Asp  
 325 330 335  
 Ile Gly Gly Arg Lys Ser Phe Trp Ile Gly Leu Asn Asp Gln Val His  
 340 345 350  
 Ala Gly His Trp Glu Trp Ile Gly Gly Glu Pro Val Ala Phe Thr Asn  
 355 360 365  
 Gly Arg Arg Gly Pro Ser Pro Arg Ser Lys Leu Gly Lys Ser Cys Val  
 370 375 380  
 Leu Val Gln Arg Gln Gly Lys Trp Gln Thr Lys Asp Cys Arg Arg Ala  
 385 390 395 400  
 Lys Pro His Asn Tyr Val Cys Ser Arg Lys Leu  
 405 410

&lt;210&gt; 4299

&lt;211&gt; 988

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 4299

nngcgaccgc tcttgctgaa aggtggctgg gagaggtcct ggtcagagtc ggagtcagag  
 60  
 tcccaggagg ggagtggagg gctcaggcac tggtgccctt gtggcctctt aggctcgagg  
 120  
 ccttgggaca ggcccccgag cacaaagtga ggctgtctat ggagttctgc agcacgtgca  
 180  
 cagcagacca tatatcactc agttccttct ggaggtcatt cttccagcag cacttggtc  
 240  
 cctgcggtat ctcttcagtc tccggacagg cggctgtctc atgacctgc tgcctcatct  
 300  
 tggtcaggat ttgcggcat ttcacctgcg tttctgcat tttctgaatg ttcaccaagt  
 360  
 tctctgagat ctcatcctcc tgcgcttgga gcttctgata gatgaaggc acctcctccc  
 420  
 gcaccagttc cagctcctcc cacaggaact tcttgctgtc ccggatctcc tgggccagca  
 480



acagagcaga aaggcacctg gaatgcccgt gcccaagctt gcagggaaca atacctgggc  
 960  
 aaccttgtaa ctgtattctc caggcagcac atgcggtggc tctgggacat tgggtgggaga  
 1020  
 aagtcctttt ggataggttt gaacgaccaa gtgcatgctg gccactggga gtggatcggg  
 1080  
 ggtgaacctg ttgccttcac caatgggaga agagggccct ctccacgctc caagcttgga  
 1140  
 aagagctgtg ttttggttca aagacaaggg aaatggcaaa caaaagactg taggagagcc  
 1200  
 aaacctcata attatgtgtg ttccagaaaa ctctaaatat aacagaccct acagggggcc  
 1260  
 acctggagtt tgtcacctat ttattcacag gatctgtgaa tattgctcca tagaaaaaca  
 1320  
 attgttatga ttgagtgggt atacctttgt gattctgtct agtgaaaatg ggacattttt  
 1380  
 aatagtgcc aagagattga taaataaata ttttttaca gataagatac aatttttgta  
 1440  
 tctcaatacc ttttaaaata aatgccagca gtattaaaa gtgtaagggt tgtttattcc  
 1500  
 agaagaccct cacccttacc ccattccaaa tctcaggag caccagtctc atagtccttg  
 1560  
 gattttttt aaaaaaatt tttggtccc ttacctctaa tgaatttatt ctgaaatag  
 1620  
 tatcgtaggt gctctacca ctttagtctg agtggaaagc caaaaaac  
 1668

&lt;210&gt; 4298

&lt;211&gt; 411

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 4298

Xaa	Met	Asp	Ser	Ala	Phe	Val	Gly	Ile	Lys	Val	Asn	Gln	Val	Ser	Ala
1				5					10					15	
Ala	Val	Gly	Lys	Asp	Phe	Thr	Val	Ile	Pro	Ser	Lys	Leu	Ile	Gln	Phe
			20					25					30		
Asp	Pro	Gly	Met	Ser	Thr	Lys	Met	Trp	Asn	Ile	Ala	Ile	Thr	Tyr	Asp
		35					40					45			
Gly	Leu	Glu	Glu	Asp	Asp	Glu	Val	Phe	Glu	Val	Ile	Leu	Asn	Ser	Pro
	50					55					60				
Val	Asn	Ala	Val	Leu	Gly	Thr	Lys	Thr	Lys	Ala	Ala	Val	Lys	Ile	Leu
65					70					75				80	
Asp	Ser	Lys	Gly	Gly	Gln	Cys	His	Pro	Ser	Tyr	Ser	Ser	Asn	Gln	Ser
			85					90					95		
Lys	His	Ser	Thr	Trp	Glu	Lys	Gly	Ile	Trp	His	Leu	Leu	Pro	Pro	Gly
			100					105					110		
Ser	Ser	Ser	Ser	Thr	Thr	Ser	Gly	Ser	Phe	His	Leu	Glu	Arg	Arg	Pro
		115					120					125			
Leu	Pro	Ser	Ser	Met	Gln	Leu	Ala	Val	Ile	Arg	Gly	Asp	Thr	Leu	Arg
	130					135					140				
Gly	Phe	Asp	Ser	Thr	Asp	Leu	Ser	Gln	Arg	Lys	Leu	Arg	Thr	Arg	Gly
145					150					155				160	
Asn	Gly	Lys	Thr	Val	Arg	Pro	Ser	Ser	Val	Tyr	Arg	Asn	Gly	Thr	Asp

1	5	10	15
Val Thr Asn Lys Ser Pro Leu Leu Ala Pro Cys Phe Val Asn Lys Ile			
	20	25	30
Cys Trp Thr Thr Ala Met Pro Val His Val His Phe Val Tyr Gly Cys			
	35	40	45
Phe Cys Ala Thr Thr Ala Gly Leu Ser Ile Ala Thr Glu Thr Pro Ile			
	50	55	60
Ala His Lys Pro Lys Thr Phe Ala Ile Glu Pro Phe Lys Lys Glu Phe			
65	70	75	80
Ala Gly Arg Ala Arg Trp Pro Trp Leu Pro Pro Val Ile Pro Ala Leu			
	85	90	95
Trp Lys Ala Glu Ala Gly Gly Glu Val Trp Ser Ser Lys Pro Ala Trp			
	100	105	110
Pro Ala Trp Arg Asn Pro Val Ser Pro Ser Gln Ile His Val Ile Ile			
	115	120	125
Pro Pro Gln Pro Pro Glu Tyr Leu Gly Leu			
130	135		

&lt;210&gt; 4297

&lt;211&gt; 1668

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 4297

```

nccatggact cggcctttgt gggataaaag gtcaaccaag tgtcagctgc agttggaaaa
60
gatttcaccg tgattccatc taaactgatt cagtttgacc caggaatgtc aactaagatg
120
tggaatatag caattaccta tgacggatta gaggaagatg atgaggtctt tgaagtaatt
180
ctgaactccc ctgtgaatgc agttcttggc acaaagacaa aagctgcagt gaaaattttg
240
gactcaaaag gaggacaatg ccattccttca tattctctca accaaagcaa gcacagcaca
300
tgaggagaagg gcatttggca tctgctgccc ccagggtctt cctcatccac cacttctggt
360
tcctttcatc tggaagaag acctcttcca tcttccatgc agctagcagt catcagggga
420
gacacccctgc ggggcttga ttctacagat ctttctcaaa ggaagcttag gaccctggg
480
aatggcaaaa cagttcgtcc atcctctgtt tatagaaatg gaacagacat catctataat
540
tatcatggga tagtttctt gaaactggag gatgacagt tcccaactca caaaaggaag
600
gccaaagtat ccattcattag tcagccacaa aagacaatca aagtggcaga actgcctcaa
660
gcagataagg tggaatccac aactgactca cacttcccca gacaggacca gttgccctca
720
tttccaaaga actgcactct ggaattaaag ggactcttcc attttgaaga aggcattccg
780
aagctgtatc agtgcaatgg gatcgctgga aaagcctgga gtccccaac caaggatgtg
840
gaagacaaat cctgtccagc cgggtggcac cagcactcag gctactgtca catcttgatc
900

```

```

      1           5           10           15
Ile Ala Val Glu Thr Asp Val His Gly Lys His Gln Gly Ser Gly
      20           25           30
Lys Trp Gln Lys Met Glu Lys Pro Tyr Ala Phe Thr Val His Cys Val
      35           40           45
Lys Arg Ala Arg Arg His Arg Trp Lys Trp Ala Gln Val Thr Phe Trp
      50           55           60
Cys Pro Glu Glu Gln Leu Cys His Leu Trp Leu Gln Thr Leu Arg Glu
      65           70           75           80
Met Leu Glu Lys Leu Thr Ser Arg Pro Lys His Leu Leu Val Phe Ile
      85           90           95
Asn Pro Phe Gly Gly Lys Gly Gln Gly Lys Arg Ile Tyr Glu Arg Lys
      100          105          110
Val Ala Pro Leu Phe Thr Leu Ala Ser Ile Thr Thr Asp Ile Ile Val
      115          120          125
Thr Glu His Ala Asn Gln Ala Lys Glu Thr Leu Tyr Glu Ile Asn Ile
      130          135          140
Asp Lys Tyr Asp Gly Ile Val Cys Val Gly Gly Asp Gly Met Phe Ser
      145          150          155          160
Glu Val Leu His Gly Leu Ile Gly Arg Thr Gln Arg Ser Ala Gly Val
      165          170          175
Asp Gln Asn His Pro Arg
      180

```

&lt;210&gt; 4295

&lt;211&gt; 431

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 4295

```

nntctagaaa atcactgtct cttctaccc tgccatctct acaccagggt tacaacaag
60
agccactgc tggctccttg ttttgtaa atgatttggt ggactacagc tatgcccgta
120
catgtacatt ttgtgtatgg ctgcttttgt gccacaacag cagggttgag tattgcgaca
180
gagaccccca ttgccacaa gcctaaaaca ttgccatcg agccctttaa gaaagagttt
240
gctggcgtg cgcggtggcc gtggctdccc cctgtaatcc cagcactttg gaaggctgag
300
gcaggcgtg aggtctggag ttcgaaacca gcctggccag cgtggcgaaa ccctgtctcc
360
ccctcccaga ttcacgtgat tatccacact cagcctcctg agtacctggg actataggcg
420
cgtgccaacc a
431

```

&lt;210&gt; 4296

&lt;211&gt; 138

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 4296

```

Xaa Leu Glu Asn His Cys Leu Leu Leu Pro Cys His Leu Tyr Thr Arg

```

```

                20                25                30
Tyr Ser Lys Pro Thr Asp Ile Ser Trp Arg Asp Thr Leu Ser Gln Lys
                35                40                45
Phe Gly Ser Ser Asp His Leu Glu Lys Leu Phe Lys Met Asp Glu Ala
                50                55                60
Ser Ala Gln Leu Leu Ala Tyr Lys Glu Lys Gly His Ser Gln Ser Ser
65                70                75                80
Gln Phe Ser Ser Asp Gln Glu Ile Ala His Leu Leu Pro Glu Asn Val
                85                90                95
Ser Ala Leu Pro Ala Thr Val Ala Val Ala Ser Pro His Thr Thr Ser
                100                105                110
Ala Thr Pro Lys Pro Ala Thr Leu Leu Pro Thr Asn Ala Ser Val Thr
                115                120                125
Pro Ser Gly Thr Ser Gln Pro Gln Leu Ala Thr Thr Ala Pro Pro Val
                130                135                140
Thr Thr Val Thr Ser Gln Pro Pro Thr Thr Leu Ile Ser Thr Val Phe
145                150                155                160
Thr Arg Ala Val Ala Thr Leu Gln Ala Met Ala Thr
                165                170

```

&lt;210&gt; 4293

&lt;211&gt; 547

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 4293

```

gccggcgccc ccggcgcgga tgctgtctct gtgcctgtat ctgagatcat cgccgttgag
60
gaaacagacg ttcacgggaa acatcaaggc agtggaaaat ggcagaaaat ggaaaagcct
120
tacgctttta cagttcactg tgtaaagaga gcacgacggc accgctggaa gtgggcgcag
180
gtgactttct ggtgtccaga ggagcagctg tgtcacttgt ggctgcagac cctgcgggag
240
atgctggaga agctgacgtc cagaccaaag catctactgg tatttatcaa cccgtttgga
300
ggaaaaggac aaggcaagcg gatatatgaa agaaaagtgg caccactgtt caccttagcc
360
tccatcacca ctgacatcat cgttactgaa catgctaatac agccaagga gactctgtat
420
gagattaaca tagacaaata cgacggcatc gtctgtgtcg gcggagatgg tatgttcagc
480
gaggtgtgc acggtctgat tgggaggacg cagaggagcg ccggggtcga ccagaaccac
540
ccccggg
547

```

&lt;210&gt; 4294

&lt;211&gt; 182

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 4294

Ala Gly Ala Pro Gly Ala Asp Ala Cys Ser Val Pro Val Ser Glu Ile

<213> Homo sapiens

<400> 4290

```

Met Thr Thr Leu Pro Val Arg Asp Met Arg Glu Lys Tyr Gly Ser Leu
 1              5              10              15
Leu Thr Ser Gly Val Thr Ala Gln His Ile Ser Arg Leu Cys Phe His
      20              25              30
Ile Gly Leu Ala Lys Ser Leu Leu Gly Thr Val Phe Leu Leu Lys His
      35              40              45
Thr Gln Cys Leu Asn Leu Gln Val Trp Val Gly Gly Ser Pro His Gly
      50              55              60
Ile Leu Cys Ser Val Pro Val Leu Leu Ser Leu Ala Ile Gln Val Pro
65              70              75              80
Val Arg Ile Leu Ser Pro Leu Asn Asn Gly Ala Cys Gly Arg Pro Ser
      85              90              95
Pro Cys Phe Trp Ser Pro Cys Ala Glu Ala Ala Val Thr Cys Gly Glu
      100             105             110
Leu

```

<210> 4291

<211> 517

<212> DNA

<213> Homo sapiens

<400> 4291

```

nnaaatttgc caagccaaga gttaccccag gaagattctc tttacatgg ccaattttca
60
caagcagtca ctcccctagc ccatcatcac acagattatt caaagcccac cgatatctca
120
tggagagaca cactttctca gaagtttgga tcctcagatc acttgagaaa actattttaag
180
atggatgaag caagtgccca gctccttgct tataaggaaa aaggccattc tcagagttca
240
caattttcct ctgatcaaga aatagctcat ctgctgcttg aaaatgtgag tgcgctccca
300
gctacgggtg cagttgcttc tccacatacc acctcgggta ctccaaagcc cgccaccctt
360
ctaccaccca atgcttcagt gacaccttct gggacttccc agccacagct ggccaccaca
420
gctccacctg taaccactgt cactttctcag cctcccacga ccttcatttc tacagttttt
480
acacgggctg tggctacact ccaagcaatg gctacaa
517

```

<210> 4292

<211> 172

<212> PRT

<213> Homo sapiens

<400> 4292

```

Xaa Asn Leu Pro Ser Gln Glu Leu Pro Gln Glu Asp Ser Leu Leu His
 1              5              10              15
Gly Gln Phe Ser Gln Ala Val Thr Pro Leu Ala His His His Thr Asp

```

&lt;400&gt; 4288

```

Met Arg Val Ala Thr Lys Ser Gly Arg Lys Arg Trp Leu Lys Ala Thr
 1           5           10           15
Thr Met Lys Asn Ser Val Arg Leu Val Ala Met Ala Pro Ser Pro Ala
          20           25           30
Leu Thr Ser Ile Ser Ser Glu Pro Ser Glu Ala Trp Val Gln Ala Phe
          35           40           45
Ala Ser Tyr Arg Met Ser Pro Gly Asn Trp Lys Thr Xaa Val Leu Ala
          50           55           60
Gln Thr Leu Val Glu Ala Leu Gln Leu Asp Pro Glu Thr Leu Ala Asn
65           70           75           80
Glu Thr Ala Ala Arg Ala Ala Asn Val Ala Arg Ala Ala Ala Ser Asn
          85           90           95
Arg Ala Ala Arg Ala Ala Ala Ala Ala Arg Thr Ala Phe Ser Gln
          100          105          110
Val Val Ala Ser His Arg Val Ala Thr Pro Gln Val Ser Gly Glu Asp
          115          120          125
Thr Gln Pro Thr Thr Tyr Ala Ala Glu Ala Gln Gly Pro Thr Pro Glu
          130          135          140
Pro Pro Leu Ala Ser Pro Gln Thr Ser Gln Met Leu Val Thr Ser Lys
145          150          155          160
Met Ala Ala Pro Glu Ala Pro Ala Thr Ser Ala Gln Ser Gln Thr Gly
          165          170          175
Ser Pro Ala Gln Glu Ala Ala Thr Glu Gly Pro Ser Ser Ala Cys Ala
          180          185          190
Phe Ser Gln Ala Pro Cys Ala Arg Glu Val Asp Ala Asn Arg Pro Ser
          195          200          205
Thr Ala Phe Leu Gly Gln Asn Asp Val Phe Asp Phe Thr Gln Pro Ala
          210          215          220
Val Ser Val Ala Trp Leu Pro Ala Pro Lys Arg Pro Ala Gln Pro Arg
225          230          235          240

```

&lt;210&gt; 4289

&lt;211&gt; 353

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 4289

```

ggatccctgg gaagatgact accctgctg tgcgggatat gagggagaaa tatgggagcc
60
tcctcacttc aggtgtcact gctcagcata tatccaggct ttgttttcat attggtcttg
120
caaagagcct tttgggaaca gttttcttat tgaaacatac tcagtgttta aacctgcagg
180
tgtgggttgg tggcagtcca catggcatcc tttgctctgt ccctgttctc ctgtctctgg
240
ctattcaggt tcccgtgagg atactgtcac ccttgaataa tggagcttgc ggaagaccaa
300
gccctgttt ttggagtct tgtgctgagg ccgctgtaac ttgaggagag ttg
353

```

&lt;210&gt; 4290

&lt;211&gt; 113

&lt;212&gt; PRT

```

                20                25                30
Arg Leu Pro Ser Pro Pro Arg Thr His Pro Thr Thr Ala Pro Asn Leu
      35                40                45
Ser Cys Thr Ala Val Tyr Thr Leu Ser Ser Val Glu Ser Pro Ser Ala
      50                55                60
Pro Ser Ser Leu Ser Ser Cys Arg Ser Ala Val His Val Leu Gln Asp
65      70                75                80
Ser Ile Asp Ser Leu Thr Leu Cys Ser Gly Ala Cys Pro Lys Ala Ser
      85                90                95
Ser Leu Arg Gly His Lys Gly Thr Ser Ala
      100                105

```

&lt;210&gt; 4287

&lt;211&gt; 868

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 4287

```

cgagggcgcg actgcggggt tcctggtgct gaggacggac gccattggag ttcccgagaa
60
ggctgagctc tcattccct gggaccgca gcatggctga gggaagcttc agcgtgcaat
120
cgaaagcta cagtgttgaa gacatggatg agggtagcga cgaagtcggg gaggaagaga
180
tggttgaagg caacgactat gaagaattcg gtgcgtttgg tggctatggc accctcacca
240
gctttgacat ccatatctc agagccttcg gaagcttggg tccaggcctt cgcatttat
300
cgaatgagcc ctgggaactg gaaaaccnct gtgctggccc agaccctggt ggaggcattg
360
cagctggatc cggaacact tgccaatgag acggcggccc gtgctgcaa cgtagcccgc
420
gccgcccgt ccaaccgtgc ggctcgggccc gctgccgccc ctgccgtac cgccttcagt
480
caggtggtcg ctagccaccg ggtggccacg ccgcaggtct caggagagga taccagcccc
540
acgacctag ccgcccaggc tcaggggccc acccctgagc ccccccttgc ttctccgag
600
acctcccaga tgtagtcac cagtaagatg gctgcccccg aggctccggc aacctccgca
660
cagtcaccaga caggctcccc ggcccaggag gctgctactg agggccctag tagcgctgt
720
gcattctctc aggtccgtg tgccaggag gtggacgcca accggcccag cacagccttc
780
ctgggccaga atgatgtctt cgatttcact cagccggcag tgcagtggc atggcttccc
840
gcgcccaga gacctgccc gccaaagag
868

```

&lt;210&gt; 4288

&lt;211&gt; 240

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

<211> 91  
 <212> PRT  
 <213> Homo sapiens

<400> 4284  
 Met Gly Cys Pro Ser Ala Ala Asp Arg Phe Pro Arg Arg Pro Asn Arg  
 1 5 10 15  
 Ser Asn Gly Gln Gly Arg Gly Ala Gly Gly Pro Gly Glu Thr Glu Ser  
 20 25 30  
 Pro Pro Gly Pro His Arg Val Ala Pro Thr Glu Ile Thr Pro Val Gln  
 35 40 45  
 Leu Gln Lys Pro Ser Arg Lys Pro Lys Leu Val Arg His Asn Phe Gly  
 50 55 60  
 Leu Ser Ser Leu Ile Pro Ala Arg Thr Pro Pro Asn Cys Ser Pro Cys  
 65 70 75 80  
 Pro Ala Gln Arg Met Gln Arg Ser Arg Pro Xaa  
 85 90

<210> 4285  
 <211> 591  
 <212> DNA  
 <213> Homo sapiens

<400> 4285  
 nagatctcag agaacttggt gaacattcag aaaatgcaga aaacgcaggt gaaatgccgc  
 60  
 aaaatcctga ccaagatgaa gcagcagggt catgagacag ccgcctgtcc ggagactgaa  
 120  
 gagataccgc agggagccag tggctgctgg aaggatgacc tccagaagga actgagtgat  
 180  
 atatggtgat gccagcctg cagtctgacc cctgaccctc ctctgaaccc gttcccccaa  
 240  
 cgggatctgg cagtgaccac cagaacctgg agcccacctg agtcacagact tccctcacc  
 300  
 cctaggactc accccaccac ggcccccaac cttagctgta ctgctgtcta caccctgagc  
 360  
 agtgtggagt ctcccagcgc cccagctcc ttgtcttctt gcaggtctgc tgtgcacgtg  
 420  
 ctgcaggact ccatagacag cctcactttg tgctcggggg cctgtcccaa ggctcgcagc  
 480  
 ctaagaggcc acaagggcac cagtgcctga gccctccact cccctcctgg gactctgact  
 540  
 ccgactgtga ccaggacctc tccagccac ctttcagcaa gagcgccgc a  
 591

<210> 4286  
 <211> 106  
 <212> PRT  
 <213> Homo sapiens

<400> 4286  
 Cys Pro Ala Cys Ser Leu Thr Pro Asp Pro Pro Leu Asn Pro Phe Pro  
 1 5 10 15  
 Gln Arg Asp Leu Ala Val Thr Thr Arg Thr Trp Ser Pro Pro Glu Ser



tggtttatga ggccggaagt aagcaagcac cccctcatat caacctggca cttcacaccc  
 240  
 cccatgggta tcagtggggg tgctggctgg ctggcaggca gccagagaca tttcagcagg  
 300  
 tcaggcatgg atgcagggtg aaatgagaga ggatcagtga ggcattcat gtcttttgag  
 360  
 tggcttacag atgagtgggc tccagtctca aatgaggaga acaaataagg aagtaggagc  
 420  
 tcagggttct tgtgtgtctc ataggcagct gcctatccct gggtgataca gctccctggc  
 480  
 acaccattc ccaagggcac aggatcc  
 507

<210> 4282

<211> 106

<212> PRT

<213> Homo sapiens

<400> 4282

Met	Asn	Ala	Leu	Thr	Asp	Pro	Leu	Ser	Phe	Pro	Pro	Ala	Ser	Met	Pro
1				5					10					15	
Asp	Leu	Leu	Lys	Cys	Leu	Trp	Leu	Pro	Ala	Ser	Gln	Pro	Ala	Pro	Pro
		20					25					30			
Leu	Ile	Thr	Met	Gly	Gly	Val	Lys	Cys	Gln	Val	Asp	Met	Arg	Gly	Cys
	35					40					45				
Leu	Leu	Thr	Ser	Gly	Leu	Ile	Asn	Gln	Pro	Tyr	Lys	Cys	Asp	Arg	Gly
	50				55					60					
Arg	Cys	Trp	Arg	Glu	Ala	His	Cys	Leu	Ser	Glu	Ser	Ala	Gln	Arg	Thr
65				70					75				80		
Glu	Ser	Gly	Asp	Ser	Trp	Gln	Lys	Arg	Gly	Gly	Leu	Arg	Leu	Trp	Gly
		85						90				95			
Ile	Trp	Pro	Ile	Gly	Gln	Leu	Trp	Gly	Ser						
		100					105								

<210> 4283

<211> 315

<212> DNA

<213> Homo sapiens

<400> 4283

gaattctcaa ccagaacagc ccagcaggaa aggagccggc atgggggtgcc cctctgcagc  
 60  
 cgaccgtttt cctagaaggc ctaaccgctc aaacggggcag gggagggggg cgggcggccc  
 120  
 gggagaaaacc gagtccccgc cgggtcccca ccgtgtggcg ccgaccgaaa taactccagt  
 180  
 ccagctgcaa aaacctccc gaaaacccaa gcttgtccgg cacaacttcg gtctctccag  
 240  
 cctcattcct gcccgcactc cgccaaaactg ctgcacctgc ccagcgcagc ggatgcagcg  
 300  
 ctcccgggccc nacgg  
 315

<210> 4284

```

                245                250                255
Asp Ala Asn Leu Pro Ser Leu Gln Lys Pro Cys Pro Ser Thr Leu Leu
                260                265                270
Gln Gln His Met Ala Asp Leu Leu Gln Gln Gly Pro Asp Val Ala Pro
                275                280                285
Ser Phe Leu Asn Ser Val Leu Asn Gln Leu Asn Trp Ala Phe Ser Glu
                290                295                300
Phe Ile Gly Met Ile Gln Glu Ile Gln Gln Ala Ala Glu Arg Leu Glu
305                310                315                320
Arg Asn Phe Val Asp Ser Arg Gln Leu Lys Val Cys Ala Thr Cys Phe
                325                330                335
Asp Leu Ser Val Ser Leu Leu Arg Val Leu Glu Met Thr Ile Thr Leu
                340                345                350
Val Pro Glu Ile Phe Leu Asp Trp Thr Arg Pro Thr Ser Glu Met Leu
                355                360                365
Leu Arg Arg Leu Ala Gln Leu Leu Asn Gln Val Leu Asn Arg Val Thr
                370                375                380
Ala Glu Arg Asn Leu Phe Asp Arg Val Val Thr Leu Arg Leu Pro Gly
385                390                395                400
Leu Glu Ser Val Asp His Tyr Pro Ile Leu Val Ala Val Thr Gly Ile
                405                410                415
Leu Val Gln Leu Leu Val Arg Gly Pro Ala Ser Glu Arg Glu Gln Ala
                420                425                430
Thr Ser Val Leu Leu Ala Asp Pro Cys Phe Gln Leu Arg Ser Ile Cys
                435                440                445
Tyr Leu Leu Gly Gln Pro Glu Pro Pro Ala Pro Gly Thr Ala Leu Pro
                450                455                460
Ala Pro Asp Arg Lys Arg Phe Ser Leu Gln Ser Tyr Ala Asp Tyr Ile
465                470                475                480
Ser Ala Asp Glu Leu Ala Gln Val Glu Gln Met Leu Ala His Leu Thr
                485                490                495
Ser Ala Ser Ala Gln Ala Ala Ala Ala Ser Leu Pro Thr Ser Glu Glu
                500                505                510
Asp Leu Cys Pro Ile Cys Tyr Ala His Pro Ile Ser Ala Val Phe Gln
                515                520                525
Pro Cys Gly His Lys Ser Cys Lys Ala Cys Ile Asn Gln His Leu Met
                530                535                540
Asn Asn Lys Asp Cys Phe Phe Cys Lys Thr Thr Ile Val Ser Val Glu
545                550                555                560
Asp Trp Glu Lys Gly Ala Asn Thr Ser Thr Thr Ser Ser Ala Ala
                565                570                575

```

&lt;210&gt; 4281

&lt;211&gt; 507

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 4281

acgcgtgaag ggacagagct ggggccttgt caggagcccc acagttggcc aatgggccag

60

atgccccata gtctcagccc acctctcttc tgccatgagt cccctgattc tgtcctttga

120

gctgactctg agaggcagtg ggcttcccg cagcacctcc ccctatcaca tttgtagggc

180

caggcagcag ctgcctccct gccaccagt gaggaggacc tctgcccacat ctgctatgcc  
 1560  
 cacccecatct ctgctgtgtt ccagccctgt ggccacaagt cctgcaaagc ctgtatcaac  
 1620  
 cagcacctga tgaacaacaa ggactgcttc ttctgcaaaa ccaccatcgt gtctgtagag  
 1680  
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 1740  
 gtgccatcct ggaacctcca cctttgaacc cagagccagg ctgggcccta tttatgagct  
 1800  
 ccctttgccc ttctcctgta tcccacacca ccacatccaa cctccttgcc tgctgtatc  
 1860  
 ctcattggtg ggagcccagc catggcccta attgtgcctg agcttgactt tcagtcaggg  
 1920  
 ccacagttag cattaaatta ttattccata caaaaaaaaaaaa aaa  
 1963

&lt;210&gt; 4280

&lt;211&gt; 575

&lt;212&gt; PRT.

&lt;213&gt; Homo sapiens

&lt;400&gt; 4280

Arg	Pro	Leu	Thr	Glu	Asn	Ser	Leu	Leu	Glu	Val	Leu	Asp	Gly	Thr	Val
1				5					10					15	
Met	Met	Tyr	Ser	Leu	Ser	Val	His	Gln	Gln	Leu	Gly	Lys	Met	Val	Gly
			20					25					30		
Val	Ser	Asp	Asp	Val	Asn	Glu	Tyr	Ala	Met	Ala	Leu	Arg	Asp	Thr	Glu
		35				40						45			
Asp	Lys	Leu	Arg	Arg	Cys	Pro	Lys	Arg	Arg	Lys	Asp	Ile	Leu	Ala	Glu
	50				55						60				
Leu	Thr	Lys	Ser	Gln	Lys	Val	Phe	Ser	Glu	Lys	Leu	Asp	His	Leu	Ser
65				70					75					80	
Arg	Arg	Leu	Ala	Trp	Val	His	Ala	Thr	Val	Tyr	Ser	Gln	Glu	Lys	Met
				85					90					95	
Leu	Asp	Ile	Tyr	Trp	Leu	Leu	Arg	Val	Cys	Leu	Arg	Thr	Ile	Glu	His
			100					105					110		
Gly	Asp	Arg	Thr	Gly	Ser	Leu	Phe	Ala	Phe	Met	Pro	Glu	Phe	Tyr	Leu
		115				120						125			
Ser	Val	Ala	Ile	Asn	Ser	Tyr	Ser	Ala	Leu	Lys	Asn	Tyr	Phe	Gly	Pro
	130					135					140				
Val	His	Ser	Met	Glu	Glu	Leu	Pro	Gly	Tyr	Glu	Glu	Thr	Leu	Thr	Arg
145				150						155				160	
Leu	Ala	Ala	Ile	Leu	Ala	Lys	His	Phe	Ala	Asp	Ala	Arg	Ile	Val	Gly
			165					170					175		
Thr	Asp	Ile	Arg	Asp	Ser	Leu	Met	Gln	Ala	Leu	Ala	Ser	Tyr	Val	Cys
		180						185					190		
Tyr	Pro	His	Ser	Leu	Arg	Ala	Val	Glu	Arg	Ile	Pro	Glu	Glu	Gln	Arg
		195				200							205		
Ile	Ala	Met	Val	Arg	Asn	Leu	Leu	Ala	Pro	Tyr	Glu	Gln	Arg	Pro	Trp
	210					215					220				
Ala	Gln	Thr	Asn	Trp	Ile	Leu	Val	Arg	Leu	Trp	Arg	Gly	Cys	Gly	Phe
225				230						235				240	
Gly	Tyr	Arg	Tyr	Thr	Arg	Leu	Pro	His	Leu	Leu	Lys	Thr	Lys	Leu	Glu

&lt;210&gt; 4279

&lt;211&gt; 1963

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 4279

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60  
ctgagcgtac accagcagct gggcaagatg gtgggtgtgt ctgatgatgt caacgagtat  
120  
gcaatggccc tgagagacac cgaggacaag ctacgtcggg gcccgaagag gaggaaggac  
180  
atccttgca agttgacaa gagccagaag gttttctcag aaaagctgga ccacctgagc  
240  
cgccgtcttg cctgggtcca tgccactgtc tactcccagg agaagatgct ggacatctac  
300  
tggctgctgc gcgtctgcct gcggaccatt gagcacgggt atcgcacagg gtctctcttt  
360  
gccttcatgc ccgagttcta cctgagcgtg gccatcaaca gctacagtgc tctcaagaat  
420  
tactttggtc ccgtgcacag catggaggag ctcccaggct atgaagagac cctgaccgcg  
480  
ctggctgcca ttctcgccaa acactttgcc gacgcacgca ttgtgggcac tgacatccga  
540  
gactcactga tgcaggccct ggccagctac gtgtgctacc cacactccct gcgggctgtg  
600ccgaggagca gcgtatcgcc atgggtgagga acctcctggc gccctatgag 660  
cagcggccct gggcccagac caactggatc ctgggtgcggc tctggagggg ctgtggcttc  
720  
gggtaccgct atacacggct gccacatctg ctgaaaacca aacttgagga cgccaatttg  
780  
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840  
cagcagggtc ctgatgtggc acccagcttc ctcaacagcg tcctcaatca gctcaactgg  
900  
gccttctctg aattcattgg catgatccaa gagatccagc aggtgctga gcgcctggag  
960  
cggaactttg tggacagccg gcagctcaag gtatgtgcca cctgctttga cctctcggtc  
1020  
agcctgctgc gtgtcttggg gatgactatc aactgggtgc ctgagatatt ccttgactgg  
1080  
acctggccta cctctgagat gctgctgcgg cgtcttgac agctgctaaa ccagggtgctg  
1140  
aaccgggtga cagctgagag gaacctgttt gatcgtgtgg tcacctacg gctgcctggc  
1200  
ctagagagcg tggaccacta tccattctg gtggcagtga cgggcatcct ggtgcagctc  
1260  
ctggtgcgtg gccagcctc agagagagag caagccacat cagtgtcctt ggcagatccc  
1320  
tgcttcagc tacgtcaat atgctatctc ctgggacagc cagagcccc agcacctggc  
1380  
actgctctgc cagcccctga ccggaagcgc ttctccctgc agagctatgc ggattatata  
1440  
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1500

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<210> 4278
<211> 253
<212> PRT
<213> Homo sapiens
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Met	Thr	Ala	Asp	Lys	Asp	Lys	Asp	Lys	Glu	Lys	Asp	Arg	Asp
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Arg	Asp	Arg	Asp	Arg	Glu	Arg	Glu	Lys	Arg	Asp	Lys	Ala	Arg
			20					25				30	
Glu	Asn	Ser	Arg	Pro	Arg	Arg	Ser	Cys	Thr	Leu	Glu	Gly	Gly
			35				40					45	
Asn	Tyr	Ala	Glu	Ser	Asp	His	Ser	Glu	Asp	Glu	Asp	Asn	Asn
						55					60		
Ser	Ala	Thr	Ala	Glu	Glu	Ser	Thr	Lys	Lys	Asn	Lys	Lys	Pro
65					70					75			80
Lys	Lys	Lys	Ser	Arg	Tyr	Glu	Arg	Thr	Asp	Thr	Gly	Glu	Ile
				85					90				95
Tyr	Ile	Thr	Glu	Asp	Asp	Val	Val	Tyr	Arg	Pro	Gly	Asp	Cys
			100					105				110	
Ile	Glu	Ser	Arg	Arg	Pro	Asn	Thr	Pro	Tyr	Phe	Ile	Cys	Ser
			115				120					125	
Asp	Phe	Lys	Leu	Val	His	Asn	Ser	Gln	Ala	Cys	Cys	Arg	Ser
			130			135					140		
Pro	Ala	Leu	Cys	Asp	Pro	Pro	Ala	Cys	Ser	Leu	Pro	Val	Ala
145					150					155			
Pro	Pro	Gln	His	Leu	Ser	Glu	Ala	Gly	Arg	Gly	Pro	Val	Gly
				165					170				175
Arg	Asp	His	Leu	Leu	Met	Asn	Val	Lys	Trp	Tyr	Tyr	Arg	Gln
			180					185				190	
Val	Pro	Asp	Ser	Val	Tyr	Gln	His	Leu	Val	Gln	Asp	Arg	His
			195				200				205		
Asn	Asp	Ser	Gly	Arg	Glu	Leu	Val	Ile	Thr	Asp	Pro	Val	Ile
						215					220		
Arg	Glu	Leu	Phe	Ile	Ser	Asp	Tyr	Val	Asp	Thr	Tyr	His	Ala
225					230					235			
Leu	Arg	Gly	Lys	Cys	Asn	Ile	Leu	His	Phe	Ser	Asp	Ile	
				245					250				

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<210> 4277
<211> 1070
<212> DNA
<213> Homo sapiens
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<477> 4277
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120
aggaccaggc ccgcgggctc agctctcgcc gccagcgggc cgcagcattt ttgaaacgtt
180
ggggttgttg gagtggtttg attttccctg gaattgagtg agaaattcag aagactgaag
240
cccaggctta ctgtctacct ttcacggagg cctagccgtg agaggacaga agaaggcacg
300
tggcgaatca tgacagcgga caaagacaaa gacaaagaca aagagaagga ccgggaccga
360
gaccgggacc gagagagaga gaaaagagac aaagcaagag agagtgagaa ttcaaggcca
420
cgccggagct gtaccttga aggaggagcc aaaaattatg ctgagagtga tcacagtga
480
gacgaggaca atgacaacaa tagtgccacc gcagaggagt ccacgaagaa gaataagaag
540
aaaccaccga aaaaaaagtc tcgttatgaa aggacagata ccggtgagat aacatcctac
600
atcactgaag atgatgtggt ctacagacca ggagactgtg tgtatatcga ggtcggagg
660

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225

230

235

&lt;210&gt; 4275

&lt;211&gt; 874

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 4275

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60

ggggcgcacg tagtggtcac tggaccccc aatgcgggca agagcagcct agtgaacctg

120

ctcagtcgga agcctgtgtc catcgtgtcc ccggagccag ggaccacccg tgacgtgctg

180

gagacccag tcgacctggc cggatttctt gtgctgctga gcgacacggc tgggttgctg

240

gagggcgtgg ggcccggtga gcaggagggc gtgcggcgcg cccgggagag gctagagcag

300

gctgacctca ttctggccat gctggatgct tctgacctgg cctctccctc cagttgcaac

360

ttcttgcca ccgtcgtagc ctctgtggga gccagagcc ccagtgcagc cagccagcgc

420

ctcctcctgg tgctgaacaa gtcggacctg ctgtccccgg agggcccagg tcccggctct

480

gacctgcccc cgcacctgct gctgtcctgt ctgacgggag aggggctgga cggcctcctg

540

gaggcgctga ggaaggagct agctgcagtg tgtggggacc cgtccacaga tccccgctg

600

ctgacccgag caaggcacca gcaccacctc cagggttgcc tggatgcctt cggccactac

660

aagcagtcaa aagacctggc cctggcgga gaggcgctgc ggggtggccc gggtcacctg

720

acccggctca cagggtggagg gggtagcgag gagatcctgg acatcatctt ccaggacttc

780

tgtgtgggca agtgacggga tccaggaat tcgcacccaa gctgcgtgga gaccaggag

840

cctcggggga tctggaaaca gtttaggcca attg

874

&lt;210&gt; 4276

&lt;211&gt; 264

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 4276

Met Gln Val Ala Leu Gly Ala His Leu Arg Asp Ala Arg Arg Gly Gln

1

5

10

15

Arg Leu Arg Ser Gly Ala His Val Val Val Thr Gly Pro Pro Asn Ala

20

25

30

Gly Lys Ser Ser Leu Val Asn Leu Leu Ser Arg Lys Pro Val Ser Ile

35

40

45

Val Ser Pro Glu Pro Gly Thr Thr Arg Asp Val Leu Glu Thr Pro Val

50

55

60

Asp Leu Ala Gly Phe Pro Val Leu Leu Ser Asp Thr Ala Gly Leu Arg

tgtaccgagg ctcgctgaca cagagaaacc ccaacgcgag gaaaggaatg gccagccaca  
 1620  
 ccttcgcgaa acctgtggtg gccaccagt cctaacggga caggacagag agacagagca  
 1680  
 gccctgcact gttttccctc caccacagcc atcctgtccc tcattggctc tgtgttttcc  
 1740  
 actatacaca gtcaccgtcc caatgagaaa caagaaggag caccctccac atggactccc  
 1800  
 acctgcaagt ggacagcgac attcagtcct gcactgctca cctgggttta ctgatgactc  
 1860  
 ctggctgccc caccatcctc tctgatctgt gagaaacagc taagctgctg tgacttcctc  
 1920  
 ttaggacaat gttgtgtaaa tctttgaagg acacaccgaa gacctttata ctgtgatctt  
 1980  
 ttaccctttt cactcttggc tttcttatgt tgctttcatg aatggaatgg aaaaaagatg  
 2040  
 actcagttaa ggcacaaaaa aaaaaaaaaa aaaagtcgag c  
 2081

<210> 4274

<211> 235

<212> PRT

<213> Homo sapiens

<400> 4274

Met	Ala	Leu	Gly	Lys	Leu	Leu	Leu	His	Ser	Gly	Arg	Met	Ser	Ser	Gly
1			5					10						15	
Met	Ser	Ser	Cys	Pro	Cys	Ser	Thr	Trp	Pro	Met	Trp	Asp	Thr	Ser	Asp
			20					25					30		
Glu	Glu	Ser	Ile	Arg	Ala	His	Val	Met	Ala	Ser	His	His	Ser	Lys	Arg
		35					40					45			
Arg	Gly	Arg	Ala	Ser	Ser	Glu	Ser	Gln	Gly	Leu	Gly	Ala	Gly	Val	Arg
	50					55					60				
Thr	Glu	Xaa	Asp	Val	Glu	Glu	Glu	Ala	Leu	Arg	Arg	Lys	Leu	Glu	Glu
65					70					75				80	
Leu	Thr	Ser	Asn	Val	Ser	Asp	Gln	Glu	Thr	Phe	Val	Arg	Gly	Gly	Gly
			85					90					95		
Ser	Gln	Gly	Arg	Lys	Cys	Arg	Ala	Gln	Gln	Gly	Gln	Ile	Ser	Trp	Ala
		100						105					110		
Ser	Pro	Pro	Gly	Gly	Pro	Gly	Arg	Trp	His	Gly	Cys	Pro	Ser	Asn	Gln
		115					120					125			
Gln	Thr	Gly	Lys	Lys	Pro	Gln	Asp	Pro	Gly	Asp	Pro	Val	Gln	Tyr	Asn
	130					135					140				
Arg	Thr	Thr	Asp	Glu	Glu	Leu	Ser	Glu	Leu	Glu	Asp	Arg	Val	Ala	Val
145				150						155				160	
Thr	Ala	Ser	Glu	Val	Gln	Gln	Ala	Glu	Ser	Glu	Val	Ser	Asp	Ile	Glu
			165					170					175		
Ser	Arg	Ile	Ala	Ala	Leu	Arg	Ala	Ala	Gly	Leu	Thr	Val	Lys	Pro	Ser
		180					185					190			
Gly	Lys	Pro	Arg	Arg	Lys	Ser	Asn	Leu	Pro	Ile	Phe	Leu	Pro	Arg	Val
	195						200					205			
Ala	Gly	Lys	Leu	Gly	Lys	Arg	Pro	Glu	Asp	Pro	Asn	Ala	Asp	Pro	Ser
	210					215					220				
Ser	Glu	Ala	Lys	Ala	Met	Ala	Val	Pro	Ile	Phe					



&lt;400&gt; 4273

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60  
agataggttg gtgtatgggt gggtaggatg attgatgcat ggatggatgg gctgcccatt  
120  
gagtaggtgc atgagtggat aaatgggttg gtgggtaggt gaatagatgt atagatttat  
180  
aataggggga agggtaggatt ggtagatggg tagatggagg gatacattgc tgtgtggata  
240  
ggtgggtgaa tggatgaagg agggagggat gggcaggtag atggatagat tagtggatgg  
300  
atgggtggat gggctgacaa atggcttgtt cccagactgt ttgtccttgg gtggagtcac  
360  
gcaggtatct attgcagctg ggctgaact gatatctgaa gagagaagtg gagacagcga  
420  
ccagacagat gaggatggag aacctggctc agaggcccag gccaggccc agccctttgg  
480  
cagcaaaaaa aagcgctcc tctccgtcca cgacttcgac ttcgaggag actcagatga  
540  
ctccactcag cctcaaggtc actccctgca cctgtcctca gtccctgagg ccagggacag  
600  
cccacagtcc ctcacagatg agtcctgctc agagaaggca gccctcaca aggctgaggg  
660  
cctggaggag gctgatactg gggcctcttg gtgccactcc catccggaag agcagccgac  
720  
cagcatctca ccttccagac acggcgccct ggctgagctc tgcccgctg gaggtccca  
780  
tagggaatgg ccctggggaa actgctgctg cactcgggtc ggatgtcatc aggaatgagc  
840  
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ggacgaaaat gcagagccca acagggacaa atcagttggg cctctcccc aggcggaccc  
1140  
ggacggtggc acggtgccc atcaaacc aaagagcggg aaaagcccca ggaccctggg  
1200  
gacccgtcc agtacaacag gaccacagat gaggagctgt cagagctgga ggacagagt  
1260  
gcagtgacgg cctcagaagt ccagcaggca gagagcgagg ttccagacat tgaatccagg  
1320  
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1380  
tcaaacctcc cgatatttct ccctcgagtg gctgggaaac ttggcaagag accagaggac  
1440  
ccaaatgcag acccttcaag tgaggccaag gcaatggctg tgcctatctt ctgagaagaa  
1500  
agttcagtaa ttccctgaaa agtcaaggta aagatgatga ttcttttgat cggaaatcag  
1560

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 4271

accatgtcat ttcttttgaa ctcaccggga cagcaatctg gattaaagat actacgacaa  
60

ctgactactg attttgtcca tcactacatt gttgccaata acttttcaga gcttttccat  
120

ttgtgtcct caagaaattg caaaaccaga aatcttgta tgaaactact tttaaatatg  
180

tctgaaaatc caactgcagc cagagacatg atcaatatga aggcattggc agcattaaaa  
240

ctcatcttta accacaaaga ggcaaaagcc aatcttgta gtggtgtggc catatttatt  
300

aacataaagg agcatatcag aaaaggctca attgtagtta ataaatatgg ccacaccact  
360

aacaagattg gcttttgcct ctttctggtt aaagatgagt tttaatgctg ccaatgcctt  
420

catattgatc atgtctctgg ctgcagttgg attttcagac atatttaaaa gtagtttcaa  
480

aacaagattt ctggttttgc aatttctga ggacagcaaa tggaaaagct ctgaaaagta  
540

attggcaaca atgtagtgat ggacaaaatc agtagtcagt tgtccgctc  
588

&lt;210&gt; 4272

&lt;211&gt; 134

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 4272

Thr Met Ser Phe Pro Leu Asn Ser Pro Gly Gln Gln Ser Gly Leu Lys  
1 5 10 15

Ile Leu Arg Gln Leu Thr Thr Asp Phe Val His His Tyr Ile Val Ala  
20 25 30

Asn Asn Phe Ser Glu Leu Phe His Leu Leu Ser Ser Arg Asn Cys Lys  
35 40 45

Thr Arg Asn Leu Val Met Lys Leu Leu Leu Asn Met Ser Glu Asn Pro  
50 55 60

Thr Ala Ala Arg Asp Met Ile Asn Met Lys Ala Leu Ala Ala Leu Lys  
65 70 75 80

Leu Ile Phe Asn His Lys Glu Ala Lys Ala Asn Leu Val Ser Gly Val  
85 90 95

Ala Ile Phe Ile Asn Ile Lys Glu His Ile Arg Lys Gly Ser Ile Val  
100 105 110

Val Asn Lys Tyr Gly His Thr Thr Asn Lys Ile Gly Phe Cys Leu Phe  
115 120 125

Leu Val Lys Asp Glu Phe  
130

&lt;210&gt; 4273

&lt;211&gt; 2081

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

675	680	685
Lys Ala Thr Leu Ile Ile Arg Pro Lys Phe Pro Arg Lys Leu Pro Arg		
690	695	700
Ala Lys Pro Cys Ser Asp Pro Asn Arg Val Arg Glu Pro Gly Glu Val		
705	710	715
Glu Phe Asp Ile Glu Glu Asp Tyr Thr Thr Asp Glu Asp Met Val Glu		
725	730	735
Gly Val Glu Gly Lys Leu Gly Asn Gly Ser Gly Ala Gly Gly Ile Leu		
740	745	750
Asp Leu Leu Lys Ala Ser Arg Gln Val Gly Gly Pro Asp Tyr Ala Ala		
755	760	765
Leu Thr Glu Ala Pro Ala Ser Pro Ser Thr Gln Glu Ala Ile Gln Gly		
770	775	780
Met Leu Cys Met Ala Asn Leu Gln Ser Ser Ser Ser Pro Ala Thr		
785	790	795
Ser Ser Leu Gln Ala Trp Trp Thr Gly Gly Gln Asp Arg Ser Ser Gly		
805	810	815
Ser Ser Ser Ser Gly Leu Gly Thr Val Ser Asn Ser Pro Ala Ser Gln		
820	825	830
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&lt;211&gt; 588

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&lt;211&gt; 1084

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&lt;213&gt; Homo sapiens

&lt;400&gt; 4270

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&lt;210&gt; 4268

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4140

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2520

20 25 30  
 Gly Ala Phe Leu Ile Asp Arg Ser Pro Glu Tyr Phe Glu Pro Ile Leu  
 35 40 45  
 Asn Tyr Leu Arg His Gly Gln Leu Ile Val Asn Asp Gly Ile Asn Leu  
 50 55 60  
 Leu Gly Val Leu Glu Glu Ala Arg Phe Phe Gly Ile Asp Ser Leu Ile  
 65 70 75 80  
 Glu His Leu Glu Val Ala Ile Lys Asn Ser Gln Pro Pro Glu Asp His  
 85 90 95  
 Ser Pro Ile Ser Arg Lys Glu Phe Val Arg Phe Leu Leu Ala Thr Pro  
 100 105 110  
 Thr Lys Ser Glu Leu Arg Cys Gln Gly Leu Asn Phe Ser Gly Ala Asp  
 115 120 125  
 Leu Ser Arg Leu Asp Leu Arg Tyr Ile Asn Phe Lys Met Ala Asn Leu  
 130 135 140  
 Ser Arg Cys Asn Leu Ala His Ala Asn Leu Cys Cys  
 145 150 155

&lt;210&gt; 4263

&lt;211&gt; 7710

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 4263

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 ttcatcacct gggacgaaga catgtttgac gaggagactg gcgagggggc tctggtgaac  
 180  
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 240  
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 360  
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 420  
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 660  
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 720  
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 780  
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 840  
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 900

&lt;400&gt; 4260

```

Ser Ala Thr Gly Pro Gly Val Pro Met Cys Gln Val Gly Glu Asp Tyr
 1           5           10           15
Gly Glu Pro Ala Pro Glu Glu Pro Pro Pro Ala Pro Arg Pro Ser Arg
          20           25           30
Glu Gln Lys Cys Val Lys Cys Lys Glu Ala Gln Pro Val Val Val Ile
          35           40           45
Arg Ala Gly Asp Ala Phe Cys Arg Asp Cys Phe Lys Ala Phe Tyr Val
          50           55           60
His Lys Phe Arg Ala Met Leu Gly Lys Asn Arg Leu Ile Phe Pro Gly
65           70           75           80
Glu Lys Val Leu Leu Ala Trp Ser Gly Gly Pro Ser Ser Ser Ser Met
          85           90           95
Val Trp Gln Val Leu Glu Gly Leu Ser Gln Asp Ser Ala Lys Arg Leu
          100          105          110
Arg Phe Val Ala Gly Val Ile Phe Val Asp Glu Gly Ala
          115          120          125

```

&lt;210&gt; 4261

&lt;211&gt; 592

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 4261

```

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atactcttga cttaaataatg tttgtttata aagacaaatg gagaaatcaa tttttttccc
120
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300
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360
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420
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480
cagggtttga acttcagtgg tgctgatctt tctcgtttgg accttcgata cattaacttc
540
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592

```

&lt;210&gt; 4262

&lt;211&gt; 156

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 4262

```

Ile Leu Arg Ser Thr Leu Val Asn Lys Glu Pro Asp Ser Met Leu Ala
 1           5           10           15
His Met Phe Lys Asp Lys Gly Val Trp Gly Asn Lys Gln Asp His Arg

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<210> 4259
<211> 377
<212> DNA
<213> Homo sapiens
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```
<210> 4260
<211> 125
<212> PRT
<213> Homo sapiens
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 660  
 cagcccaaca tcaacggcag tgtcgatgcc atcagtcact tgactgggaa ggtcatcaag  
 720  
 agagacgtca tgaccaggga cctgtaccag ggcctgctgc tccagagggt gcccttcaat  
 780  
 gtcgactttg ataaactgcc cagacacaag aaacttgaga ggctctgect gaccttaggg  
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 960  
 ggctgtggga aaaccaggct tattaaattc cttagcgacc tgcggcgtgg tggtagcaat  
 1020  
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 1080  
 agagtcaggg aggctgaaaa tgtggccttc gccataaagg accaacatca gttggacacc  
 1140  
 atcttgtttt ttgatgaagc caacacaacg gaagctataa gctgtatcaa agaagtccctg  
 1200  
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 1320  
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<210> 4258

<211> 314

<212> PRT

<213> Homo sapiens

<400> 4258

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Asp	Gln	Ser	Pro	Gly	Lys	His	Met	Val	Thr	Met	Asp	Gly	Val	Arg	Glu
			20					25					30		
Glu	Asp	Leu	Ala	Pro	Phe	Ser	Leu	Arg	Lys	Arg	Trp	Glu	Ser	Glu	Pro
		35					40					45			
His	Pro	Tyr	Val	Phe	Phe	Asn	Asp	Asp	His	Thr	Thr	Met	Thr	Phe	Ile
		50				55				60					
Gly	Phe	His	Leu	Gln	Pro	Asn	Ile	Asn	Gly	Ser	Val	Asp	Ala	Ile	Ser
65				70					75					80	
His	Leu	Thr	Gly	Lys	Val	Ile	Lys	Arg	Asp	Val	Met	Thr	Arg	Asp	Leu
			85					90						95	
Tyr	Gln	Gly	Leu	Leu	Leu	Gln	Arg	Val	Pro	Phe	Asn	Val	Asp	Phe	Asp



```

145          150          155          160
His Ile Thr His Lys Glu Pro Leu Val Ala Asn Asp Ile Leu Asn His
          165          170          175
Pro Asn Phe Val Lys Lys Asn Leu Cys Asn Ser Phe Ser Asp Arg Thr
          180          185          190
Val Gln Arg Phe Tyr Lys Phe Asn Thr Ser Leu Ala Gly Asp Leu Thr
          195          200          205
Asn Leu Val His Gly Ser His Cys Ser Lys Tyr Arg Leu Ala Arg Ile
          210          215          220
Pro Gly Thr Asn Ala Phe Val Gly Ile Val Asn Glu Thr Cys Asp Ser
225          230          235          240
Leu Ala Phe Cys Ala Cys Ser Met Val Asp Arg Leu Cys Leu Asn Cys
          245          250          255
His Arg Met Glu Gln Asn Glu Cys Glu Cys Pro Cys Glu Cys Pro Leu
          260          265          270
Glu Val Asn Glu Cys Thr Gly Asn Leu Thr Asn Ala Glu Asn Arg Asn
          275          280          285
Pro Ser Cys Glu Val His Gln Glu Pro Val Thr Tyr Thr Ala Ile Asp
          290          295          300
Pro Gly Leu Gln Asp Ala Leu His Gln Cys Val Asn Ser Arg Cys Ser
305          310          315          320
Gln Arg Leu Glu Ser Gly Asp Cys Phe Gly Val Leu Asp Cys Glu Trp
          325          330          335
Cys Met Val Asp Ser Asp Gly Lys Thr His Leu Asp Lys Pro Tyr Cys
          340          345          350
Ala Pro Gln Lys Glu Cys Phe Gly Gly Ile Val Gly Ala Lys Ser Pro
          355          360          365
Tyr Val Asp Asp Met Gly Ala Ile Gly Asp Glu Val Ile Thr Leu Lys
          370          375          380

```

&lt;210&gt; 4257

&lt;211&gt; 1541

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 4257

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ttcttgacat cttcccaaaa gtcacctgca ggctcccaa agaggtgata gacatggagc
120
tgagtgcctt gaggagtgc acagagcctg ggatggatct ttgggagttc tgcagcgaaa
180
ctttccaaag accttaccag tatttaagac gattcaatcc aaaccagac cttaaccgg
240
ttcaagattc agaaagggtt tgccgaaggc ccccgaggg aatgcctcca gcatttctgt
300
tttactggg gggtataaaa cccatcctgg ccaaacctcc ggaactttgc tcggttctgt
360
aattatcagc tcagagattg tgaggcctct ctcttctgca atccgagttt tattggcgac
420
acactgaggg gcttcaagaa gttcgtggtg accttcatga tctttatggc aagagatatt
480
gccacacat cactccacac ctctgaccaa agccccggga agcacatggt caccatggat
540

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 1500  
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 1860  
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 1920  
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 1980  
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 2160  
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 2205

&lt;210&gt; 4256

&lt;211&gt; 384

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 4256

Met	Ala	Thr	Ser	His	Val	Thr	Asp	Glu	Trp	Met	Thr	Gln	Met	Glu	Met
1				5					10					15	
Ser	Ser	Leu	Asn	Thr	Tyr	Ile	Val	Arg	Arg	Cys	Ile	Ala	Thr	Pro	Asn
			20					25					30		
Gly	Val	Leu	Arg	Ile	Tyr	Ser	Gly	Ser	Leu	Met	Gly	Gln	Ala	Leu	Asp
		35					40					45			
Pro	Thr	Arg	Lys	Gln	Trp	Tyr	Leu	His	Ala	Val	Ala	Asn	Pro	Gly	Leu
	50					55				60					
Ile	Ser	Leu	Thr	Gly	Pro	Tyr	Leu	Asp	Val	Gly	Gly	Ala	Gly	Tyr	Val
65				70					75					80	
Val	Thr	Ile	Ser	His	Thr	Ile	His	Ser	Ser	Ser	Thr	Gln	Leu	Ser	Ser
			85					90					95		
Gly	His	Thr	Val	Ala	Val	Met	Gly	Ile	Asp	Phe	Thr	Leu	Arg	Tyr	Phe
			100					105					110		
Tyr	Lys	Val	Leu	Met	Asp	Leu	Leu	Pro	Val	Cys	Asn	Gln	Asp	Gly	Gly
		115					120					125			
Asn	Lys	Ile	Arg	Cys	Phe	Ile	Met	Glu	Asp	Arg	Gly	Tyr	Leu	Val	Ala
	130					135					140				
His	Pro	Thr	Leu	Ile	Asp	Pro	Lys	Gly	His	Ala	Pro	Val	Glu	Gln	Gln

&lt;210&gt; 4255

&lt;211&gt; 2205

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 4255

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120  
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240  
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&lt;210&gt; 4254

&lt;211&gt; 114

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 4254

Met	Val	Ser	Leu	Trp	Val	Glu	Gly	Thr	Phe	Pro	Pro	Pro	Gly	Phe	Gly
1			5					10					15		
Leu	Ala	His	Val	Ala	Cys	Ser	Gly	His	Gly	Met	Lys	Gln	Lys	Arg	Lys
			20					25				30			
Pro	Ala	Ser	Ser	Glu	Pro	Met	Pro	Glu	Asp	Ala	Leu	Gly	Gly	Ser	Ala
			35					40				45			
Val	Pro	Val	Arg	Phe	His	Leu	His	Pro	Glu	Gly	Leu	Leu	Trp	Cys	Ser
			50			55					60				
Arg	Cys	Phe	Phe	Ser	His	Gly	Pro	Lys	Gly	Ser	Glu	Pro	Pro	Gly	Arg
65				70					75					80	
Ser	Ala	Gly	Leu	Gln	Gly	Ala	Thr	Glu	Arg	Ser	Gly	Arg	Pro	Ser	Val
			85					90				95			
Gln	Ala	Gln	Ala	Gln	Ala	Cys	Glu	Asn	Leu	Val	Pro	Ala	Thr	Val	Trp
			100					105				110			
Asp	Gly														

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65          70          75          80
Met Lys Ser Ile Arg Gln Asp Leu Thr Val Gln Gly Ile Arg Thr Glu
          85          90          95
Phe Thr Val Glu Val Tyr Glu Thr His Ala Arg Ile Ala Leu Glu Lys
          100          105          110
Gly Asp His Glu Glu Phe Asn Gln Cys Gln Thr Gln Leu Lys Ser Leu
          115          120          125
Tyr Ala Glu Asn Leu Pro Gly Asn Val Gly Glu Phe Thr Ala Tyr Arg
          130          135          140
Ile Leu Tyr Tyr Ile Phe Thr Lys Asn Ser Gly Asp Ile Thr Thr Glu
145          150          155          160
Leu Ala Tyr Leu Thr Arg Glu Leu Lys Ala Asp Pro Cys Val Ala His
          165          170          175
Ala Leu Ala Leu Arg Thr Ala Trp Ala Leu Gly Asn Tyr His Arg Phe
          180          185          190
Phe Arg Leu Tyr Cys His Ala Pro Cys Met Ser Gly Tyr Leu Val Asp
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Thr Tyr Val Val Pro Ser Ser Leu Leu Pro Leu Leu Phe Pro Ser Phe
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Arg Leu Ala Pro Pro Leu Arg Pro Ala Pro Gly Arg Arg Pro Pro Pro
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Ala Pro Asn Pro Cys Pro Gly Pro Cys Phe Pro Ile Ile Phe Leu His
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Ser Ala Leu Pro Ser Pro Val Pro Leu Ala Leu Leu Val Gly His Leu
          275          280          285
Cys Val Pro Gly His Ser Ser Pro Ser Pro His Cys Ser Gln Leu Thr
          290          295          300
Ala Ser Gly Ala Ser Ser Pro Pro His Leu Cys Val Ser Ser Ser Cys
305          310          315          320
Ser Leu Leu Pro Gly Pro Pro Ser Ser Leu Leu Ala Leu Gly Phe Leu
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Arg Thr Leu Arg Ser Leu Leu Ser Gln Leu Val Ala Val Leu Pro Pro
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&lt;210&gt; 4253

&lt;211&gt; 1287

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 4253

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&lt;210&gt; 4252

&lt;211&gt; 352

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 4252

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 Pro Asp Ile Thr Lys Arg Tyr Leu Arg Leu Thr Cys Ala Pro Asp Pro  
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 Lys Arg Ala Leu Val Lys Val Thr Ser Val Pro Glu Asp Gln Ile Leu  
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 Ile Ala Val Phe Pro Gly Leu Pro Thr Ser Ala Glu Leu Phe Ile Leu  
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 Pro Pro Lys Asn Leu Thr Glu Arg Arg Lys Gly Asn Glu Gly Asp Leu  
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 Glu Gln Ile Val Glu Thr Leu Phe Asn Ala Leu Asn Gln Asn Leu Val  
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 Gln Phe Glu Leu Lys Pro Gly Val Gln Val Ile Val Tyr Val Thr Gln  
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 Gln Val Gln His Asp Lys Glu Gln Glu Met Ile Gly Ser Val Ser Gln  
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 Glu Leu Leu Asp Lys Glu Leu Asp Thr Arg Val Ile Gly Gly Ile Ala  
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Leu Asp Trp Gly Gly Ala Leu Val Ala Met Lys His Thr Pro Leu Pro
        690                695                700
Val Arg His Leu Trp Val Ser Phe Asp Glu Gly His Ser Trp Asp Lys
705                710                715                720
Tyr Gly Phe Thr Ser Val Pro Leu Phe Val Asp Gly Ala Leu Val Glu
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Ala Gly Met Glu Thr His Ile Met Thr Val Phe Gly His Phe Ser Leu
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Arg Ser Glu Trp Gln Leu Val Lys Val Asp Tyr Lys Ser Ile Phe Ser
        755                760                765
Arg His Cys Thr Lys Glu Asp Tyr Gln Thr Trp His Leu Leu Asn Gln
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Gly Glu Pro Cys Val Met Gly Glu Arg Lys Ile Phe Lys Lys Arg Lys
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Pro Gly Ala Gln Cys Ala Leu Gly Arg Asp His Ser Gly Ser Val Val
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Ser Glu Pro Cys Val Cys Ala Asn Trp Asp Phe Glu Cys Asp Tyr Gly
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Gln Ala Met Val His Trp	Ser Gly His Asn Ser	Ser Val Ile Leu Ile
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Leu Thr Lys Leu Tyr Asp	Phe Asn Leu Gly Ser	Val Thr Glu Ser Ser
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Val Leu Ala Tyr Ser Leu	Asp Gln Lys Leu Tyr	Ser Ser Met Asp Phe
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Tyr Trp Ser Val Ala Gly	Leu Asp Lys Glu Ala	Asp Leu Val His Met
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Glu Val Arg Thr Thr Asp	Gly Tyr Ala His Tyr	Leu Thr Cys Arg Ile
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Gln Glu Cys Ala Glu Thr	Thr Arg Ser Gly Pro	Phe Ala Arg Ser Ile
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Asp Ile Ser Ser Leu Val	Val Gln Asp Glu Tyr	Ile Phe Ile Gln Val
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Thr Thr Ser Gly Arg Ala	Ser Tyr Tyr Val Ser	Tyr Arg Arg Glu Ala
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Tyr Asn Lys Gly Arg Asp	Trp Arg Leu Leu Gln	Ala Pro Asp Val Asp
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Ser Lys Glu Thr Ala Pro	Gly Leu Val Val Ala	Thr Gly Asn Ile Gly

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<212> PRT

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&lt;211&gt; 5755

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His Thr Met Ser	Ile Met Leu Ala	Val Asp Ile Leu	Gly Cys Thr Gly	
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3127

&lt;210&gt; 4240

&lt;211&gt; 860

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 4240

Met Thr Glu Gly Thr Lys Lys Thr Ser Lys Lys Phe Lys Phe Phe Lys



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&lt;210&gt; 4238

&lt;211&gt; 124

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 4238

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			20					25					30		
His	Ser	Pro	Glu	Leu	Leu	Pro	Val	Pro	Ile	Leu	Asp	Ser	Leu	Ser	Cys
			35				40					45			
Phe	Leu	Asp	Ser	Leu	Ser	Cys	Phe	Leu	Asp	Ser	Leu	Gln	Ile	Ala	Arg
		50				55					60				
Ala	Met	Gly	Val	Ala	Asp	Glu	Ala	Leu	Gly	Asn	Val	Arg	Thr	Val	Arg
					70					75				80	
Ala	Phe	Ala	Met	Glu	Gln	Arg	Glu	Glu	Glu	Arg	Tyr	Gly	Ala	Glu	Leu
				85				90						95	
Glu	Ala	Cys	Arg	Cys	Arg	Ala	Glu	Glu	Leu	Gly	Arg	Gly	Ile	Ala	Leu
			100					105					110		
Phe	Gln	Gly	Leu	Ser	Asn	Ile	Ala	Phe	Asn	Cys	Glu				
			115				120								

&lt;210&gt; 4239

&lt;211&gt; 3127

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 4239

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 840  
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<210> 4236

<211> 198

<212> PRT

<213> Homo sapiens

<400> 4236

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Phe	Thr	Ser	Ile	Ser	Asn	Ser	Leu	Thr	Ser	Thr	Ala	Ala	Ile	Gly	Leu
	20						25						30		
Ser	Phe	Thr	Thr	Ser	Thr	Thr	Thr	Ala	Thr	Phe	Thr	Thr	Asn	Thr	
	35					40				45					
Thr	Thr	Thr	Ile	Thr	Ser	Gly	Phe	Thr	Val	Asn	Gln	Asn	Gln	Leu	Leu
	50					55				60					
Ser	Arg	Gly	Phe	Glu	Asn	Leu	Val	Pro	Tyr	Thr	Ser	Thr	Val	Ser	Val
65					70				75					80	
Val	Ala	Thr	Pro	Val	Met	Thr	Tyr	Gly	His	Leu	Glu	Gly	Leu	Ile	Asn
				85				90					95		
Glu	Trp	Asn	Leu	Glu	Leu	Glu	Asp	Gln	Glu	Lys	Tyr	Phe	Leu	Leu	Gln
	100						105						110		
Ala	Thr	Gln	Val	Asn	Ala	Trp	Asp	His	Thr	Leu	Ile	Glu	Asn	Gly	Glu
	115						120					125			
Met	Ile	Arg	Ile	Leu	His	Gly	Glu	Val	Asn	Lys	Val	Lys	Leu	Asp	Gln
	130					135					140				
Lys	Arg	Leu	Glu	Gln	Glu	Leu	Asp	Phe	Ile	Leu	Ser	Gln	Gln	Gln	Glu
145					150				155					160	
Leu	Glu	Phe	Leu	Leu	Thr	Tyr	Leu	Glu	Glu	Ser	Thr	Arg	Asp	Gln	Ser
			165					170					175		
Gly	Leu	His	Tyr	Leu	Gln	Asp	Ala	Asp	Glu	Glu	His	Val	Glu	Ile	Ser
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Thr	Arg	Ser	Ala	Glu	Phe										
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<210> 4237

<211> 560

<212> DNA

<213> Homo sapiens

<400> 4237

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<210> 4235
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<212> DNA
<213> Homo sapiens
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3427

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	245	250
Lys Lys Leu Ala Ser Leu Ser Ile Gln Asn Glu Lys Arg Ala Asn Glu		255
	260	265
Leu Glu Gln Ser Val Asp His Met Lys Tyr Gln Lys Ile Gln Leu Gln		270
	275	280
Arg Lys Leu Arg Glu Glu Asn Glu Lys Arg Lys Gln Leu Asp Ala Val		285
	290	295
Ile Lys Arg Asp Gln Gln Lys Ile Lys Val Ile Gln Leu Lys Thr Gly		300
305	310	315
Gln Glu Glu Gly Leu Lys Pro Lys Ala Glu Asp Leu Asp Ala Cys Asn		320
	325	330
Leu Lys Arg Arg Lys Gly Ser Phe Gly Ser Ile Asp His Leu Gln Lys		335
	340	345
Leu Asp Glu Gln Lys Lys Trp Leu Asp Glu Glu Val Glu Lys Val Leu		350
	355	360
Asn Gln Arg Gln Glu Leu Glu Glu Leu Glu Ala Asp Leu Lys Lys Arg		365
	370	375
Glu Ala Ile Val Ser Lys Lys Glu Ala Leu Leu Gln Glu Lys Ser His		380
385	390	395
Leu Glu Asn Lys Lys Leu Arg Ser Ser Gln Ala Leu Asn Thr Asp Ser		400
	405	410
Leu Lys Ile Ser Thr Arg Leu Asn Leu Leu Glu Gln Glu Leu Ser Glu		415
	420	425
Lys Asn Val Gln Leu Gln Thr Ser Thr Ala Glu Glu Lys Thr Lys Ile		430
	435	440
Ser Glu Gln Val Glu Val Leu Gln Lys Glu Lys Asp Gln Leu Gln Lys		445
	450	455
Arg Arg His Asp Val Asp Glu Lys Leu Lys Asn Gly Arg Val Leu Ser		460
465	470	475
Pro Glu Glu Glu His Val Leu Phe Gln Leu Glu Glu Gly Ile Glu Ala		480
	485	490
Leu Glu Ala Ala Ile Glu Tyr Arg Asn Glu Ser Ile Gln Asn Arg Gln		495
	500	505
Lys Ser Leu Arg Ala Ser Phe His Asn Leu Ser Arg Gly Glu Ala Asn		510
	515	520
Val Leu Glu Lys Leu Ala Cys Leu Ser Pro Val Glu Ile Arg Thr Ile		525
	530	535
Leu Phe Arg Tyr Phe Asn Lys Val Val Asn Leu Arg Glu Ala Glu Arg		540
545	550	555
Lys Gln Gln Leu Tyr Asn Glu Glu Met Lys Met Lys Val Leu Glu Arg		560
	565	570
Asp Asn Met Val Arg Glu Leu Glu Ser Ala Leu Asp His Leu Lys Leu		575
	580	585
Gln Cys Asp Arg Arg Leu Thr Leu Gln Gln Lys Glu His Glu Gln Lys		590
	595	600
Met Gln Leu Leu Leu His His Phe Lys Glu Gln Asp Gly Glu Gly Ile		605
	610	615
Met Glu Thr Phe Lys Thr Tyr Glu Asp Lys Ile Gln Gln Leu Glu Lys		620
625	630	635
Asp Leu Tyr Phe Tyr Lys Lys Thr Ser Arg Asp His Lys Lys Lys Leu		640

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<210> 4234

<211> 833

<212> PRT

<213> Homo sapiens

<400> 4234

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			20					25				30			
Thr	Cys	Lys	Val	His	Thr	Ser	Pro	Pro	Met	Tyr	Ser	Leu	Asp	Arg	Ile
			35				40					45			
Phe	Ala	Gly	Phe	Arg	Thr	Arg	Ser	Gln	Met	Leu	Leu	Gly	His	Ile	Glu
			50				55					60			
Glu	Gln	Asp	Lys	Val	Leu	His	Cys	Gln	Phe	Ser	Asp	Asn	Ser	Asp	Asp
65						70				75				80	
Glu	Glu	Ser	Glu	Gly	Gln	Glu	Lys	Ser	Gly	Thr	Arg	Cys	Arg	Ser	Arg
			85						90					95	
Ser	Trp	Ile	Gln	Lys	Pro	Asp	Ser	Val	Cys	Ser	Leu	Val	Glu	Leu	Ser
			100					105					110		
Asp	Thr	Gln	Asp	Glu	Thr	Gln	Lys	Ser	Asp	Leu	Glu	Asn	Glu	Asp	Leu
			115				120					125			
Lys	Ile	Asp	Cys	Leu	Gln	Glu	Ser	Gln	Glu	Leu	Asn	Leu	Gln	Lys	Leu
			130				135					140			
Lys	Asn	Ser	Glu	Arg	Ile	Leu	Thr	Glu	Ala	Lys	Gln	Lys	Met	Arg	Glu
145					150				155					160	
Leu	Thr	Val	Asn	Ile	Lys	Met	Lys	Glu	Asp	Leu	Ile	Lys	Glu	Leu	Ile
			165					170						175	
Lys	Thr	Gly	Asn	Asp	Ala	Lys	Ser	Val	Ser	Lys	Gln	Tyr	Thr	Leu	Lys
			180				185					190			
Val	Thr	Lys	Leu	Glu	His	Asp	Ala	Glu	Gln	Ala	Lys	Val	Glu	Leu	Thr
			195				200					205			
Glu	Thr	Gln	Lys	Gln	Leu	Gln	Glu	Leu	Glu	Asn	Lys	Asp	Leu	Ser	Asp

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2280

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 260 265 270  
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 275 280 285  
 Met Met Asp Arg Ile Lys Lys Gly Val His Leu Arg Pro Val Asn Gln  
 290 295 300  
 Thr Ala Arg Pro Lys Thr Lys Pro Glu Ser Ser Lys Gly Cys Glu Ser  
 305 310 315 320  
 Ala Val Asp Glu Leu Lys Gly Ile Leu Gly Thr Leu Asn Lys Ser Thr  
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 Ser Ser Pro Thr Gly Ile Leu Ala Thr Ser Glu Ser Lys Ser Met Pro  
 370 375 380  
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 385 390 395 400  
 Thr Leu Glu Ala Glu Phe Asn Ser Pro Ser Pro Pro Thr Pro Glu Pro  
 405 410 415  
 Gly Glu Gly Pro Arg Lys Leu Glu Gly Cys Thr Ser Ser Lys Val Thr  
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 Phe Gln

&lt;210&gt; 4233

&lt;211&gt; 2827

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 4233

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<210> 4232

<211> 434

<212> PRT

<213> Homo sapiens

<400> 4232

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			20					25				30			
Glu	Glu	Lys	Lys	Ile	Leu	Ala	Ile	Glu	Leu	Glu	Asn	Leu	Lys	Ser	Lys
			35				40					45			
Leu	Val	Glu	Val	Ile	Glu	Glu	Val	Asn	Lys	Val	Lys	Gln	Glu	Lys	Thr
			50				55				60				
Val	Leu	Asn	Ser	Glu	Val	Leu	Glu	Gln	Arg	Lys	Val	Leu	Glu	Lys	Cys
65					70					75				80	
Asn	Arg	Val	Ser	Met	Leu	Ala	Val	Glu	Glu	Tyr	Glu	Glu	Met	Gln	Val
				85					90					95	
Asn	Leu	Glu	Leu	Glu	Lys	Asp	Leu	Arg	Lys	Lys	Ala	Glu	Ser	Phe	Ala
			100					105					110		
Gln	Glu	Met	Phe	Leu	Glu	Pro	Asn	Gln	Gly	Lys	Lys	Thr	Lys	Pro	Pro
			115					120					125		
Phe	Gly	Arg	Gln	Ser	Ser	Ile	Leu	Asp	Gln	Gln	Leu	Ala	Leu	Asp	Glu
			130				135					140			
Asn	Ala	Lys	Leu	Thr	Gln	Gln	Leu	Glu	Glu	Glu	Arg	Ile	Gln	His	Gln
145					150						155			160	
Gln	Lys	Val	Lys	Glu	Leu	Glu	Glu	Gln	Leu	Glu	Asn	Glu	Thr	Leu	His
			165					170						175	
Lys	Glu	Ile	His	Asn	Leu	Lys	Gln	Gln	Leu	Glu	Leu	Leu	Glu	Glu	Asp
			180					185					190		
Lys	Lys	Glu	Leu	Glu	Leu	Lys	Tyr	Gln	Asn	Ser	Glu	Glu	Lys	Ala	Arg
			195				200					205			
Asn	Leu	Lys	His	Ser	Val	Asp	Glu	Leu	Gln	Lys	Arg	Val	Asn	Gln	Ser
			210				215					220			
Glu	Asn	Ser	Val	Pro	Pro	Pro	Pro	Pro	Pro	Pro	Pro	Pro	Leu	Pro	Pro
225					230					235				240	
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	355		360		365										
Val	Asp	Pro	Phe	Thr	Tyr	Gln	Ser	Thr	Arg	Gln	Glu	Gly	Leu	Tyr	Ala
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Met	Gly	Pro	Leu	Ala	Gly	Asp	Asn	Phe	Val	Arg	Phe	Val	Gln	Gly	Gly
385					390					395				400	
Ala	Leu	Ala	Val	Ala	Ser	Ser	Leu	Leu	Arg	Lys	Glu	Thr	Arg	Lys	Pro
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Pro															

&lt;210&gt; 4231

&lt;211&gt; 1588

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 4231

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<210> 4230

<211> 417

<212> PRT

<213> Homo sapiens

<400> 4230

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			20					25					30		
Leu	Arg	Pro	Asp	Thr	Asp	Phe	Gly	Gly	Asn	Met	Lys	Ser	Val	Leu	Thr
			35				40					45			
Trp	Lys	His	Arg	Lys	Glu	His	Ala	Ile	Pro	His	Val	Val	Leu	Gly	Arg
	50					55					60				
Asn	Leu	Pro	Gly	Gly	Ala	Trp	His	Ser	Ile	Glu	Gly	Ser	Met	Val	Ile
65					70					75				80	
Leu	Ser	Gln	Gly	Gln	Trp	Met	Gly	Leu	Pro	Asp	Leu	Glu	Val	Lys	Asp
			85						90					95	
Trp	Met	Gln	Lys	Lys	Arg	Arg	Gly	Leu	Arg	Asn	Ser	Arg	Ala	Thr	Ala
			100					105					110		
Gly	Asp	Ile	Ala	His	Tyr	Tyr	Arg	Asp	Tyr	Val	Val	Lys	Lys	Gly	Leu
		115					120					125			
Gly	His	Asn	Phe	Val	Ser	Gly	Ala	Val	Val	Thr	Ala	Val	Glu	Trp	Gly
	130					135					140				
Thr	Pro	Asp	Pro	Ser	Ser	Cys	Gly	Ala	Gln	Asp	Ser	Ser	Pro	Leu	Phe
145				150					155					160	
Gln	Val	Ser	Gly	Phe	Leu	Thr	Arg	Asn	Gln	Ala	Gln	Gln	Pro	Phe	Ser
			165					170						175	
Leu	Trp	Ala	Arg	Asn	Val	Val	Leu	Ala	Thr	Gly	Thr	Phe	Asp	Ser	Pro
		180					185						190		
Ala	Arg	Leu	Gly	Ile	Pro	Gly	Glu	Ala	Leu	Pro	Phe	Ile	His	His	Glu
		195				200					205				
Leu	Ser	Ala	Leu	Glu	Ala	Ala	Thr	Arg	Val	Gly	Ala	Val	Thr	Pro	Ala
	210					215					220				
Ser	Asp	Pro	Val	Leu	Ile	Ile	Gly	Ala	Gly	Leu	Ser	Ala	Ala	Asp	Ala
225				230					235					240	
Val	Leu	Tyr	Ala	Arg	His	Tyr	Asn	Ile	Pro	Val	Ile	His	Ala	Phe	Arg
			245					250						255	
Arg	Ala	Val	Asp	Asp	Pro	Gly	Leu	Val	Phe	Asn	Gln	Leu	Pro	Lys	Met
		260					265						270		
Leu	Tyr	Pro	Glu	Tyr	His	Lys	Val	His	Gln	Met	Met	Arg	Glu	Gln	Ser
		275					280					285			
Ile	Leu	Ser	Pro	Ser	Pro	Tyr	Glu	Gly	Tyr	Arg	Ser	Leu	Pro	Arg	His
	290					295					300				
Gln	Leu	Leu	Cys	Phe	Lys	Glu	Asp	Cys	Gln	Ala	Val	Phe	Gln	Asp	Leu
305				310					315					320	
Glu	Gly	Val	Glu	Lys	Val	Phe	Gly	Val	Ser	Leu	Val	Leu	Val	Leu	Ile
			325					330					335		
Gly	Ser	His	Pro	Asp	Leu	Ser	Phe	Leu	Pro	Gly	Ala	Gly	Ala	Asp	Phe
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&lt;400&gt; 4229

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360  
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420  
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480  
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<210> 4228

<211> 298

<212> PRT

<213> Homo sapiens

<400> 4228

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 Leu Ala Thr Leu Glu Lys Gln Glu Ile Ile Glu Gln Leu Leu Ser Asn  
 35 40 45  
 Ile Phe His Lys Glu Lys Asn Glu Ser Ala Ile Val Ser Ala Ile Gln  
 50 55 60  
 Ile Leu Leu Thr Leu Leu Glu Thr Arg Arg Pro Thr Phe Glu Gly His  
 65 70 75 80  
 Ile Glu Ile Cys Pro Pro Gly Met Ser His Ser Ala Cys Ser Val Asn  
 85 90 95  
 Lys Ser Val Leu Glu Ala Ile Arg Gly Arg Leu Gly Ser Phe His Glu  
 100 105 110  
 Leu Leu Leu Glu Pro Pro Lys Lys Ser Val Met Lys Thr Thr Trp Gly  
 115 120 125  
 Val Leu Asp Pro Pro Val Gly Asn Thr Arg Leu Asn Val Ile Arg Leu  
 130 135 140  
 Ile Ser Ser Leu Leu Gln Thr Asn Thr Ser Ser Ile Asn Gly Asp Leu  
 145 150 155 160  
 Met Glu Leu Asn Ser Ile Gly Val Ile Leu Asn Met Phe Phe Lys Tyr  
 165 170 175  
 Thr Trp Asn Asn Phe Leu His Thr Gln Val Glu Ile Cys Ile Ala Leu  
 180 185 190  
 Ile Leu Ala Ser Pro Phe Glu Asn Thr Glu Asn Ala Thr Ile Thr Asp  
 195 200 205  
 Gln Asp Ser Thr Gly Asp Asn Leu Leu Leu Lys His Leu Phe Gln Lys  
 210 215 220  
 Cys Gln Leu Ile Glu Arg Ile Leu Glu Ala Trp Glu Met Asn Glu Lys  
 225 230 235 240  
 Lys Gln Ala Glu Gly Gly Arg Arg His Gly Tyr Met Gly His Leu Thr  
 245 250 255  
 Arg Ile Ala Asn Cys Ile Val His Ser Thr Asp Lys Gly Pro Asn Ser  
 260 265 270  
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<210> 4229

<211> 1612

<212> DNA

<213> Homo sapiens

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Pro	Val	Gln	Ala	Ala	Asp	Asn	Ala	Pro	Pro	Ala	Lys	Gln	Arg	Thr	Pro
			100					105					110		
Ile	Cys	Thr	Val	Tyr	Ile	Glu	Val	Leu	Pro	Pro	Asn	Asn	Gln	Ser	Pro
		115				120					125				
Pro	Arg	Phe	Pro	Gln	Leu	Met	Tyr	Ser	Leu	Glu	Ile	Ser	Glu	Ala	Met
	130				135				140						
Arg	Val	Gly	Ala	Val	Leu	Leu	Asn	Leu	Gln	Ala	Thr				
145				150					155						

&lt;210&gt; 4227

&lt;211&gt; 1199

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 4227

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120

cattcaaattg catcacaatc actttgtgaa attgttcgcc tgagcagaga ccagatgtta  
180

caaattcaga acagtacaga gcccgacccc ctgcttgcca ctctagaaaa gcaagaaatt  
240

atagagcagc ttctatcaaa tattttccac aaggagaaaa atgagtcagc catagtcagt  
300

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360

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420

gccatcagag gaagacttgg atcttttcat gaactcctgc tggagccacc caagaaaagt  
480

gtgatgaaga ccacatgggg tgtgctggat cctcctgtgg ggaatacccg gttgaatgtc  
540

attaggttga tatccagcct gcttcaaacc aataccagca gtataaatgg ggaccttatg  
600

gagctgaata gcattggagt catattgaac atgttcttca agtatacatg gaataacttt  
660

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720

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780

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840

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960

aagttatttg tgaaatttga attacatttt tgttggttg caggaaggat ttaagggtca  
1020

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1080

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Ser Gly Asn Ala Ala Ser Asp Lys Asn Ile Lys Asp Gly Val Cys Ala
                180                185                190
Gln Ile Glu Lys Asn Phe Ala Arg Ala Lys Trp Lys Lys Ala Val Arg
                195                200                205
Val Thr Thr Leu Met Lys Arg Leu Arg Ala Pro Glu Gln Ser Ser Thr
                210                215                220
Ala Ala Ala Gln Ser Ala Ser Ala Thr Asp Thr Ala Thr Pro Gly Ala
225                230                235                240
Ala Asp Arg Ser Ala Thr Pro Ala Thr Asp Gly Ser Ala Thr Pro Ala
                245                250                255
Thr Asp Gly Ser Val Thr Pro Ala Thr Asp Gly Ser Ile Thr Pro Ala
                260                265                270
Ile Asp Gly Ser Val Thr Pro Ala Thr Asp Arg Ser
                275                280

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&lt;210&gt; 4225

&lt;211&gt; 470

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 4225

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240
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300
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360
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420
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470

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&lt;210&gt; 4226

&lt;211&gt; 156

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 4226

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Xaa Val Gln Glu Ser Glu Pro Val Ile Val Asn Ile Gln Val Met Asp
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Ala Asn Asp Asn Thr Pro Thr Phe Pro Glu Ile Ser Tyr Asp Val Tyr
                20                25                30
Val Tyr Thr Asp Met Arg Pro Gly Asp Arg Val Leu Gln Leu Thr Ala
                35                40                45
Val Asp Ala Asp Glu Gly Ser Asn Gly Glu Ile Thr Tyr Glu Ile Leu
                50                55                60
Val Gly Ala Gln Gly Asp Phe Ile Ile Asn Lys Thr Thr Gly Leu Ile

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 240  
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 300  
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 360  
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 840  
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 852

&lt;210&gt; 4224

&lt;211&gt; 284

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 4224

Ile	Leu	Asp	Gln	Gly	Tyr	Tyr	Ser	Glu	Arg	Asp	Thr	Ser	Asn	Val	Val
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Arg	Gln	Val	Leu	Glu	Ala	Val	Ala	Tyr	Leu	His	Ser	Leu	Lys	Ile	Val
		20						25					30		
His	Arg	Asn	Leu	Lys	Leu	Glu	Asn	Leu	Val	Tyr	Tyr	Asn	Arg	Leu	Lys
		35					40					45			
Asn	Ser	Lys	Ile	Val	Ile	Ser	Asp	Phe	His	Leu	Ala	Lys	Leu	Glu	Asn
	50					55				60					
Gly	Leu	Ile	Lys	Glu	Pro	Cys	Gly	Thr	Pro	Glu	Asp	Phe	Ala	Pro	Gln
65				70						75				80	
Gly	Glu	Gly	Arg	Gln	Arg	Tyr	Gly	Arg	Pro	Val	Asp	Cys	Trp	Ala	Ile
			85					90					95		
Gly	Val	Ile	Met	Tyr	Ile	Leu	Leu	Ser	Gly	Asn	Pro	Pro	Phe	Tyr	Glu
		100						105					110		
Glu	Val	Glu	Glu	Asp	Asp	Tyr	Glu	Asn	His	Asp	Lys	Asn	Leu	Phe	Arg
		115					120					125			
Lys	Ile	Leu	Ala	Gly	Asp	Tyr	Glu	Phe	Asp	Ser	Pro	Tyr	Trp	Asp	Asp
	130					135					140				
Ile	Ser	Gln	Ala	Ala	Lys	Asp	Leu	Val	Thr	Arg	Leu	Met	Glu	Val	Glu
145					150					155				160	
Gln	Asp	Gln	Arg	Ile	Thr	Ala	Glu	Glu	Ala	Ile	Ser	His	Glu	Trp	Ile



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 660  
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 720  
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 780  
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&lt;210&gt; 4222

&lt;211&gt; 127

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 4222

Met	Ala	Tyr	Met	Cys	Thr	Glu	Asn	Lys	Ile	Pro	Glu	Lys	Pro	Phe	Asp
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Phe	Phe	Phe	Phe	Ser	Phe	Leu	Gln	Val	Ala	Arg	Ser	Leu	Glu	Asp	His
			20					25					30		
Ser	Ser	Glu	Val	Gln	Val	Val	Lys	His	Leu	Leu	His	Val	Leu	Val	His
		35					40					45			
Ala	Ser	Pro	His	His	Pro	Leu	Pro	Thr	Ser	Ser	Pro	Val	Val	Gln	Lys
		50				55					60				
Ala	Pro	Cys	Lys	His	Ala	Leu	Ser	Leu	Lys	Phe	Thr	Glu	His	Ala	Gly
65					70					75				80	
Val	Ser	Ala	Glu	Gly	Leu	Pro	Gly	Ala	Lys	Asp	Gly	Pro	Gly	Val	Gln
			85						90					95	
Met	Leu	Ser	Phe	Leu	His	Gly	Asn	Ser	Thr	Ala	Thr	Asn	Val	Thr	Gly
			100					105					110		
Phe	Cys	Ala	Phe	His	Gln	His	Ser	Ser	Leu	Lys	Asn	Trp	Cys	Ser	
		115					120					125			

&lt;210&gt; 4223

&lt;211&gt; 852

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 4223

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 120

<211> 258  
 <212> PRT  
 <213> Homo sapiens

<400> 4220

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Arg Ala Glu Arg Gly Ala Pro Ala Gly His Gly Glu Asp Gly Pro Val
 35           40           45
Leu Pro Gln Arg Arg Gln Gln Arg Leu Arg Glu Arg Asp Ala Gly Gln
 50           55           60
Arg Gly His Arg Gln Arg Val Leu Gly Ala Gly Leu His Glu Arg Glu
 65           70           75           80
Gln Gln Leu Arg Gly Arg Gln Val Pro Glu Pro Gln Asp Pro Glu Glu
 85           90           95
Thr Leu Gln Ser Arg Phe Ser Glu Thr Glu Ala Tyr Pro Ser Thr Ile
 100          105          110
Pro Gly His Leu Phe Pro Cys Glu Lys Thr Pro Gln Gln His Arg Arg
 115          120          125
Pro Leu Gly Gly Trp Xaa Pro Leu Arg Ser Ser Pro Arg Gly Leu Gly
 130          135          140
Glu Pro Leu Arg Leu Lys Ser Xaa Glu Ile Asp Asp Val Glu Arg Leu
 145          150          155          160
Gln Arg Arg Arg Gly Ala Ser Lys Glu Ala Met Cys Phe Asn Ala
 165          170          175
Lys Leu Lys Ile Leu Glu His Arg Gln Gln Arg Ile Ala Glu Val Arg
 180          185          190
Ala Lys Tyr Glu Trp Leu Met Lys Glu Leu Glu Ala Thr Lys Gln Tyr
 195          200          205
Leu Met Leu Asp Pro Asn Lys Trp Leu Ser Glu Phe Asp Leu Glu Gln
 210          215          220
Val Trp Glu Leu Asp Ser Leu Glu Tyr Leu Glu Ala Leu Glu Cys Val
 225          230          235          240
Thr Glu Arg Leu Glu Ser Arg Val Asn Phe Cys Lys Ala His Leu Met
 245          250          255
Met Leu
  
```

<210> 4221  
 <211> 789  
 <212> DNA  
 <213> Homo sapiens

<400> 4221

```

aatgtgaaga ggattaaaga ataaagaaaa aacaaaaaag tcttatacta aaataagaaa
 60
tcagcccat cttggcacag ttctcatgca gaattattgca ccagtggtga actaacgcta
 120
gaagcttcaa actgtataaa tttaaagtga tttgcatatt ataaaaataa agataaacat
 180
atacatatatt tacactagtt atggaacagc aatgaacgtc agtcgatccc tctttcacat
 240
  
```

```

      1           5           10           15
Ser Leu Val Ser Leu Ser Tyr Ile His Thr His Thr Gln Pro Ala Thr
      20           25           30
Gly Pro Gln Arg Cys Leu Ser Leu Cys Pro Cys Leu Leu Ser Arg Thr
      35           40           45
His Thr His Thr Ser Gln Pro Gln Ala His Gln Ser Leu Ser Val Ser
      50           55           60
Leu Ser Leu Ser Leu Ser Leu Thr His Ile His Leu Ser His Arg Pro
      65           70           75           80
Thr Arg Val Ser Leu Leu Val Pro Gly Ser Ser Leu Ser His Thr Pro
      85           90           95
Thr His Thr His Thr Ala Gln Pro Gln Ala His Glu Gly Val Ser Leu
      100          105          110
Ser Leu Ser Leu Ser His Thr His Thr His Thr Pro Val Gln
      115          120          125
Leu His Arg Gly Leu Gly Gln Glu Thr Asp Leu Asn Thr His Thr Thr
      130          135          140
Leu Cys Cys Glu Trp Pro Leu Pro Ser Asn Asn
      145          150          155

```

&lt;210&gt; 4219

&lt;211&gt; 774

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 4219

```

ngcggccgcg cacctgctcc cgtcgcccta cagcaagatc acgccccgc ggaggcccca
60
ccgctgcagc agcggccacg gcagcgacaa cagcagcgtg ctgagcgggg agctcccgcc
120
ggccatgggg aagacggccc tgttctacca cagcggcggc agcagcggct acgagagcgt
180
gatcggggac agcagaggcca ccggcagcgc gtcctcggcg caggactcca cgagcgagaa
240
cagcagctcc gtgggcggca ggtgccggag cctcaagacc ccgaagaaac gctccaatcc
300
aggttctcag agacggaggc ttatcccagc actatccctg gacaccttt cccctgtgag
360
aaaaccccc aacagcacag gcgtccgctg ggtggatggn nccccttgcg gagcagcccc
420
aggggccttg gggaaccttt gagattaaag tctnatgaaa tcgatgacgt ggagcgccctg
480
cagcggcgac gagggggtgc cagcaaggag gccatgtgct tcaatgcaaa gctgaagatt
540
ctggaacacc gccagcagag gatcgccgag gtccgcgcga agtacgagtg gctgatgaag
600
gagctggagg cgaccaaaaca gtatctgatg ctggatccca acaagtggct cagtgaattt
660
gacttggagc aggtttggga gctggattcc ctggagtacc tggaggcact ggagtgtgtg
720
acggagcgcc tggagagccg tgtcaacttc tgcaaggccc atctcatgat gctc
774

```

&lt;210&gt; 4220

```
<210> 4217
<211> 619
<212> DNA
<213> Homo sapiens
```

```
<210> 4218
<211> 155
<212> PRT
<213> Homo sapiens
```

3411

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 180  
 gagatcctga tccagggctt gacagaagat atgggtgactg ttttaatccg ggctgcggtg  
 240  
 agcatgctgg gagtccctgt ggaccagat actttgcatg ccaccctttg tttctgtttg  
 300  
 agggtcactc gggggcccca attagccatg atgtttgcag aactgaagaa taccgcgatg  
 360  
 atcttgaatt tgaccagag ctcaggcttc aatgggttta cccccctggt cacccttctc  
 420  
 ttaagacaca tcattgagga cccctgtacc cttcgtcata ccattgaaaa ggtgttctgc  
 480  
 tcagcagcta caagtggagc tggtagcact acctctggtg ttgtgtctgg cagcctcggc  
 540  
 tctcgggaga tcaactacat ccttcgtgtc cttgggccag ccgcatgccg caatccagac  
 600  
 atattcacag aagtggccaa ctgctgtatc cgcctcggcc ttctgcccc tcgaggctca  
 660  
 ggaactgctt cagatgatga atttgagaat cttagaatta aaggccctaa tgctgtacag  
 720  
 ctggtgaaga ccacccttt gaagccctca cctctgcctg tcattccctga tactatcaag  
 780  
 gaagtgatct atgatatgct gaatgctctg gctgcatacc atgctccaga ggaagcagat  
 840  
 aaatctgac ctaaactggt gggtatgacc caagagggtg gccagctcct gcaagacatg  
 900  
 ggtgatgatg tataccagca gtaccgggtc cttacgcgt  
 939

&lt;210&gt; 4216

&lt;211&gt; 287

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 4216

Met	Asp	Ile	Lys	Arg	Lys	Glu	Asn	Lys	Gly	Asn	Asp	Thr	Pro	Leu	Ala
1			5						10					15	
Leu	Glu	Ser	Thr	Asn	Thr	Glu	Lys	Glu	Thr	Ser	Leu	Glu	Glu	Thr	Lys
		20						25				30			
Ile	Gly	Glu	Ile	Leu	Ile	Gln	Gly	Leu	Thr	Glu	Asp	Met	Val	Thr	Val
		35					40					45			
Leu	Ile	Arg	Ala	Cys	Val	Ser	Met	Leu	Gly	Val	Pro	Val	Asp	Pro	Asp
50						55					60				
Thr	Leu	His	Ala	Thr	Leu	Cys	Phe	Cys	Leu	Arg	Val	Thr	Arg	Gly	Pro
65					70					75				80	
Gln	Leu	Ala	Met	Met	Phe	Ala	Glu	Leu	Lys	Asn	Thr	Arg	Met	Ile	Leu
			85						90					95	
Asn	Leu	Thr	Gln	Ser	Ser	Gly	Phe	Asn	Gly	Phe	Thr	Pro	Leu	Val	Thr
		100						105					110		
Leu	Leu	Leu	Arg	His	Ile	Ile	Glu	Asp	Pro	Cys	Thr	Leu	Arg	His	Thr
		115					120					125			
Met	Glu	Lys	Val	Val	Arg	Ser	Ala	Ala	Thr	Ser	Gly	Ala	Gly	Ser	Thr
130						135					140				
Thr	Ser	Gly	Val	Val	Ser	Gly	Ser	Leu	Gly	Ser	Arg	Glu	Ile	Asn	Tyr

<210> 4213  
 <211> 383  
 <212> DNA  
 <213> Homo sapiens

<400> 4213  
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 atggaggcac gcgagggcat gcacctcaag aacgtggact tccgtgagtt catggtggcc  
 120  
 ttcccggacc cggcccgcc gccctggtac gcctgctcgt cggccttctg ggccgcgccg  
 180  
 ctgctcacgc tgctgtggcc gctgcgagtg ctggccgagt accgcacggc ctacgcgcac  
 240  
 taccacgtgg agaagctgtt tggcctggag ggcccgggct cggccagcag cgcaggcggt  
 300  
 ggcctcagcc ccagcgatga gctgctgccc ccgctcacc accgcctgcc gcgggtcaac  
 360  
 acagtagaca gcacggagct cgg  
 383

<210> 4214  
 <211> 127  
 <212> PRT  
 <213> Homo sapiens

<400> 4214  
 Xaa Ala Tyr Leu Cys Gln Arg Ala Arg Phe Phe Ala Glu Asn Glu Gly  
 1 5 10 15  
 Leu Asp Asp Tyr Met Glu Ala Arg Glu Gly Met His Leu Lys Asn Val  
 20 25 30  
 Asp Phe Arg Glu Phe Met Val Ala Phe Pro Asp Pro Ala Arg Pro Pro  
 35 40 45  
 Trp Tyr Ala Cys Ser Ser Ala Phe Trp Ala Ala Ala Leu Leu Thr Leu  
 50 55 60  
 Ser Trp Pro Leu Arg Val Leu Ala Glu Tyr Arg Thr Ala Tyr Ala His  
 65 70 75 80  
 Tyr His Val Glu Lys Leu Phe Gly Leu Glu Gly Pro Gly Ser Ala Ser  
 85 90 95  
 Ser Ala Gly Gly Gly Leu Ser Pro Ser Asp Glu Leu Leu Pro Pro Leu  
 100 105 110  
 Thr His Arg Leu Pro Arg Val Asn Thr Val Asp Ser Thr Glu Leu  
 115 120 125

<210> 4215  
 <211> 939  
 <212> DNA  
 <213> Homo sapiens

<400> 4215  
 nggtacctcg gctgaataaa aattcaaaaa aacagcaatg gacaggaact tgagaagacg  
 60  
 ctggaagaaa gcaaagaaat ggatatcaaa cgtaaagaaa ataaaggcaa tgatacccct  
 120

770		775		780
Glu Gln Leu Ala Ala Glu Ala Glu Arg Asp Gln Pro Leu Arg Ala Gln				
785		790		795
Ser Lys Ile Leu Phe Val Arg Ser Asp Ala Ser Arg Glu Glu Leu Ala				800
	805		810	815
Glu Leu Ala Gln Gln Val Asn Pro Glu Glu Ile Gln Leu Gly Glu Asp				
	820		825	830
Glu Asp Glu Asp Glu Met Asp Leu Glu Pro Asn Glu Val Arg Leu Glu				
	835		840	845
Gln Gln Ser Val Pro Ala Ala Val Phe Gly Ser Leu Lys Glu Asp				
850		855		860

&lt;210&gt; 4211

&lt;211&gt; 456

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 4211

```

ggggatcgct agccccagc ttctcagaac taaatatgaa agctcttgct cgtctacgct
60
tagttacaac agactccctg ggcctactgt aggggtcaag agcagatttc cagactctca
120
agctggaaaa gagacgctcc aactgcgac gacaaccaac acatgggaca agctgagaaa
180
gtgcactcag gacttcgct gatgtcacca ccatggcaat acttagatcc tgttgcttaa
240
gcataccatg tcgctgaaag agggaaagaa aatgaaagag cgtcctttaa aaagacgtaa
300
aattacactt tcaactactac tggttcctat ccttgtgcag taaagtacaa cctggccagg
360
gtttaccagc tctacctgca actgagtcag aaaggcaaag tagtcagctt tgtccatgct
420
gtacggaatt tgctccacaa acccccttgc tctaga
456

```

&lt;210&gt; 4212

&lt;211&gt; 81

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 4212

Met Leu Lys Gln Gln Asp Leu Ser Ile Ala Met Val Val Thr Ser Arg				
1	5	10	15	
Glu Val Leu Ser Ala Leu Ser Gln Leu Val Pro Cys Val Gly Cys Arg				
	20	25	30	
Arg Ser Val Glu Arg Leu Phe Ser Ser Leu Arg Val Trp Lys Ser Ala				
	35	40	45	
Leu Asp Pro Tyr Ser Arg Pro Arg Glu Ser Val Val Thr Lys Arg Arg				
	50	55	60	
Arg Ala Arg Ala Phe Ile Phe Ser Ser Glu Lys Leu Gly Ala Ser Asp				
65	70	75	80	
Pro				

3407



aaggaagact gacccgtccc tcccccatcc cccctcccca cccctcccc aatacagcta  
 2640  
 cgtttgtaca tcaaaaaaaaa a  
 2661

<210> 4210  
 <211> 863  
 <212> PRT  
 <213> Homo sapiens

<400> 4210  
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 1 5 10 15  
 Ser Arg Pro Glu Arg Pro Asp Leu Val Phe Glu Glu Glu Asp Leu Pro  
 20 25 30  
 Tyr Glu Glu Glu Ile Met Arg Asn Gln Phe Ser Val Lys Cys Trp Leu  
 35 40 45  
 Arg Tyr Ile Glu Phe Lys Gln Gly Ala Pro Lys Pro Arg Leu Asn Gln  
 50 55 60  
 Leu Tyr Glu Arg Ala Leu Lys Leu Leu Pro Cys Ser Tyr Lys Leu Trp  
 65 70 75 80  
 Tyr Arg Tyr Leu Lys Ala Arg Arg Ala Gln Val Lys His Arg Cys Val  
 85 90 95  
 Thr Asp Pro Ala Tyr Glu Asp Val Asn Asn Cys His Glu Arg Ala Phe  
 100 105 110  
 Val Phe Met His Lys Met Pro Arg Leu Trp Leu Asp Tyr Cys Gln Phe  
 115 120 125  
 Leu Met Asp Gln Gly Arg Val Thr His Thr Arg Arg Thr Phe Asp Arg  
 130 135 140  
 Ala Leu Arg Ala Leu Pro Ile Thr Gln His Ser Arg Ile Trp Pro Leu  
 145 150 155 160  
 Tyr Leu Arg Phe Leu Arg Ser His Pro Leu Pro Glu Thr Ala Val Arg  
 165 170 175  
 Gly Tyr Arg Arg Phe Leu Lys Leu Ser Pro Glu Ser Ala Glu Glu Tyr  
 180 185 190  
 Ile Glu Tyr Leu Lys Ser Ser Asp Arg Leu Asp Glu Ala Ala Gln Arg  
 195 200 205  
 Leu Ala Thr Val Val Asn Asp Glu Arg Phe Val Ser Lys Ala Gly Lys  
 210 215 220  
 Ser Asn Tyr Gln Leu Trp His Glu Leu Cys Asp Leu Ile Ser Gln Asn  
 225 230 235 240  
 Pro Asp Lys Val Gln Ser Leu Asn Val Asp Ala Ile Ile Arg Gly Gly  
 245 250 255  
 Leu Thr Arg Phe Thr Asp Gln Leu Gly Lys Leu Trp Cys Ser Leu Ala  
 260 265 270  
 Asp Tyr Tyr Ile Arg Ser Gly His Phe Glu Lys Ala Arg Asp Val Tyr  
 275 280 285  
 Glu Glu Ala Ile Arg Thr Val Met Thr Val Arg Asp Phe Thr Gln Val  
 290 295 300  
 Phe Asp Ser Tyr Ala Gln Phe Glu Glu Ser Met Ile Ala Ala Lys Met  
 305 310 315 320  
 Glu Thr Ala Ser Glu Leu Gly Arg Glu Glu Asp Asp Val Asp Leu  
 325 330 335  
 Glu Leu Arg Leu Ala Arg Phe Glu His Leu Ile Ser Arg Arg Pro Leu

gagaccgcct cggagctggg tcgcgaggag gaggatgatg tggacctgga gctgcgcctg  
1020  
gcccgccttcg agcacctcat cagccggcgg cccctgcacc tcagcagcgt cttgctgcgc  
1080  
caaaaccac accacgtgca cgagtggcac aagcgtgtcg ccctgcacca gggccgcccc  
1140  
cgggagatca tcaacaccta cacagaggct gtgcagacgg tggacccctt caaggccaca  
1200  
ggcaagcccc acactctgtg ggtggcgttt gccaaagttt atgaggacaa cggacagctg  
1260  
gacgatgccc gtgtcatcct ggagaaggcc accaaggatga acttcaagca ggtggatgac  
1320  
ctggcaagcg tgtggtgtca gtgcggagag ctggagctcc gacacgagaa ctacgatgag  
1380  
gccttgccgc tgctgcgaaa ggccacggcg ctgcctccgc cgggcccaggt atttgatggt  
1440  
tcagagcccc tgcagaaccg cgtgtacaag tcaactgaagg tctgggccat gctcgccgac  
1500  
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1560  
ctgcgtatcg caacacccca gatcgtcatc aactatgcca tgttcctgga ggagcacaag  
1620  
tacttcgagg agagcttcaa ggcgtagag cgcgcatct cgtgttcaa gtggcccaac  
1680  
gtgtccgaca tctggagcac ctacctgacc aaattcattg cccgctatgg gggccgcaag  
1740  
ctggagcggg cacgggacct gtttgaacag gctctggacg gctgcccccc aaaatatgcc  
1800  
aagaccttgt acctgctgta cgcacagctg gaggaggagt ggggcctggc ccggcatgcc  
1860  
atggccgtgt acgagcgtgc caccagggcc gtggagcccc cccagcagta tgacatgttc  
1920  
aacatctaca tcaagcgggc ggccgagatc tatggggtca cccacacccg cggcatctac  
1980  
cagaaggcca ttgaggtgct gtcggacgag cacgcgcgtg agatgtgcct gcggtttgca  
2040  
gacatggagt gcaagctcgg ggagatcgac cgcgcccggg ctatctacag cttctgctcc  
2100  
cagatctgtg atccccggac aactggggca ttctggcaaa cgtggaagga ctttgaggtc  
2160  
cggcatggca acgaggacac catcaggag atgctgagga tacggcggag tgtgcaggcc  
2220  
acgtacaaca ctcaggtaaa cttcatggcc tcgcagatgc tcaaggtgtc gggcagtgcc  
2280  
acgggcaccg tgtctgacct ggctcccggg cagagcggca tggatgacat gaagttgctg  
2340  
gaacagagag cagaacagct ggcggtgag gcggagcgtg accagccctt gcgcgccag  
2400  
agcaagatcc tgttcgtgag gagtgcgcc tcccgggagg agctggcaga gctggcacag  
2460  
caggtcaacc ccgaggagat ccagctgggc gaggacgagg acgaggacga gatggacctg  
2520  
gagcccaacg aggttcggct ggagcagcag agcgtgccag ccgcagtgtt tgggagcctg  
2580

```
<210> 4209
<211> 2661
<212> DNA
<213> Homo sapiens
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3404

&lt;400&gt; 4207

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 gtttcttatt atttctgaca gacaggttct gaggagaaat taatttagtc ttttttcggg  
 120  
 tatcaactac tccaacagtt ttgccatgat cacgtaattg agctacataa tccaaagacc  
 180  
 gctgggacaa ctcatatgcc ttacgaggac cttttttcag gccaagtctc tcagctgttg  
 240  
 aagttggctc aggacactga cgaaatttct ttggcggcac tatagcagga gttgttctac  
 300  
 aacttaggta atttgaactt ctattctgtc cttttttggc atctgaatga gttttcttag  
 360  
 gggctcttaga aactggaact ttctgatgg gttctgtaca agtacaaagc tttgaagact  
 420  
 tcttttgtga aaccgtagtg gctctctgaa tacgtgaatt gggagttgaa gtccttctat  
 480  
 caatactttt aaaatcattt cccacaagct ctctcttatt agtatcagac tggccctcat  
 540  
 ttctgacaga agatgaagac ctcacaggat cttcagccat tggtttttca gatcgttttc  
 600  
 tcttaggctt ttttacttca atttcacaaa attcttcaac agaaatactc cgtgggtctg  
 660  
 tgtgttcttc aatgccctct gtcctttttt taacaacttc agatacataa tctgtacaac  
 720  
 cctgaccatt tgtagtattg gctataggag ccaaacattt tttctcacca tcttgaactg  
 780  
 aattattatc gtctggatga tcttgccaaa ctgaaaacac ttcagatgaa ctttcaaact  
 840  
 caaaacactg agaatcagat tcctcaaact gaaaaagagt ctctgtcttt tcttccttta  
 900  
 ctggattctt ttcttcctta ctattaactg ttgaaacgtg ctgctctgga tgttcctctt  
 960  
 caaggcatat tttgtcctgt ttagtgagtt tctcaagact caggattctt tcatca  
 1016

&lt;210&gt; 4208

&lt;211&gt; 193

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 4208

Met	Ala	Glu	Asp	Pro	Val	Arg	Ser	Ser	Ser	Ser	Val	Arg	Asn	Glu	Gly
1				5					10					15	
Gln	Ser	Asp	Thr	Asn	Lys	Arg	Glu	Leu	Val	Gly	Asn	Asp	Phe	Lys	Ser
			20					25					30		
Ile	Asp	Arg	Arg	Thr	Ser	Thr	Pro	Asn	Ser	Arg	Ile	Gln	Arg	Ala	Thr
			35				40					45			
Thr	Val	Ser	Gln	Lys	Lys	Ser	Ser	Lys	Leu	Cys	Thr	Cys	Thr	Glu	Pro
	50				55						60				
Ile	Arg	Lys	Val	Pro	Val	Ser	Lys	Thr	Pro	Lys	Lys	Thr	His	Ser	Asp
65					70					75				80	
Ala	Lys	Lys	Gly	Gln	Asn	Arg	Ser	Ser	Asn	Tyr	Leu	Ser	Cys	Arg	Thr

```

      435      440      445
Arg Glu Glu Glu Pro Glu Glu Ser Glu Pro Ala Ala His Ser Phe Ala
  450      455      460
Ser Ser Glu Ala Asp Asp Gln Glu Val Ser Glu Glu Asn Phe Glu Glu
465      470      475      480
Arg Lys Tyr Pro Gly Glu Val Thr Leu Thr Asn Phe Lys Leu Lys Phe
      485      490      495
Leu Ser Lys Asp Ile Lys Lys Glu Leu Leu Thr Cys Pro Thr Pro Gly
      500      505      510
Cys Asp Gly Ser Gly His Ile Thr Gly Asn Tyr Ala Ser His Arg Ser
  515      520      525
Leu Ser Gly Cys Pro Leu Ala Asp Lys Ser Leu Arg Asn Leu Met Ala
  530      535      540
Ala His Ser Ala Asp Leu Lys Cys Pro Thr Pro Gly Cys Asp Gly Ser
545      550      555      560
Gly His Ile Thr Gly Asn Tyr Ala Ser His Arg Ser Leu Ser Gly Cys
      565      570      575
Pro Arg Ala Lys Lys Ser Gly Val Lys Val Ala Pro Thr Lys Asp Asp
      580      585      590
Lys Glu Asp Pro Glu Leu Met Lys Cys Pro Val Pro Gly Cys Val Gly
  595      600      605
Leu Gly His Ile Ser Gly Lys Tyr Ala Ser His Arg Ser Ala Ser Gly
  610      615      620
Cys Pro Leu Ala Ala Arg Arg Gln Lys Glu Gly Ser Leu Asn Gly Ser
625      630      635      640
Ser Phe Ser Trp Lys Ser Leu Lys Asn Glu Gly Pro Thr Cys Pro Thr
      645      650      655
Pro Gly Cys Asp Gly Ser Gly His Ala Asn Gly Ser Phe Leu Thr His
  660      665      670
Arg Ser Leu Ser Gly Cys Pro Arg Ala Thr Phe Ala Gly Lys Lys Gly
  675      680      685
Lys Leu Ser Gly Asp Glu Val Leu Ser Pro Lys Phe Lys Thr Ser Asp
  690      695      700
Val Leu Glu Asn Asp Glu Glu Ile Lys Gln Leu Asn Gln Glu Ile Arg
705      710      715      720
Asp Leu Asn Glu Ser Asn Ser Glu Met Glu Ala Ala Met Val Gln Leu
      725      730      735
Gln Ser Gln Ile Ser Ser Met Glu Lys Asn Leu Lys Asn Ile Glu Glu
      740      745      750
Glu Asn Lys Leu Ile Glu Glu Gln Asn Glu Ala Leu Phe Leu Glu Leu
  755      760      765
Ser Gly Leu Ser Gln Ala Leu Ile Gln Ser Leu Ala Asn Ile Arg Leu
  770      775      780
Pro His Met Glu Pro Ile Cys Glu Gln Asn Phe Asp Ala Tyr Val Ser
785      790      795      800
Thr Leu Thr Asp Met Tyr Ser Asn Gln Asp Pro Glu Asn Lys Asp Leu
      805      810      815
Leu Glu Ser Ile Lys Gln Ala Val Arg Gly Ile Gln Val
      820      825

```

&lt;210&gt; 4207

&lt;211&gt; 1016

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

1	5	10	15
Pro Asp Val Ile Phe Gln Glu Asp Thr Ser His Thr Ser Ala Gln Lys			
20	25	30	
Ala Pro Glu Leu Arg Gly Pro Glu Ser Pro Ser Pro Lys Pro Glu Tyr			
35	40	45	
Ser Val Ile Val Glu Val Arg Ser Asp Asp Asp Lys Asp Glu Asp Thr			
50	55	60	
His Ser Arg Lys Ser Thr Val Thr Asp Glu Ser Glu Met Gln Asp Met			
65	70	75	80
Met Thr Arg Gly Asn Leu Gly Leu Leu Glu Gln Ala Ile Ala Leu Lys			
85	90	95	
Ala Glu Gln Val Arg Thr Val Cys Glu Pro Gly Cys Pro Pro Ala Glu			
100	105	110	
Gln Ser Gln Leu Gly Leu Gly Glu Pro Gly Lys Ala Ala Lys Pro Leu			
115	120	125	
Asp Thr Val Arg Lys Ser Tyr Tyr Ser Lys Asp Pro Ser Arg Ala Glu			
130	135	140	
Lys Arg Glu Ile Lys Cys Pro Thr Pro Gly Cys Asp Gly Thr Gly His			
145	150	155	160
Val Thr Gly Leu Tyr Pro His His Arg Ser Leu Ser Gly Cys Pro His			
165	170	175	
Lys Asp Arg Ile Pro Pro Glu Ile Leu Ala Met His Glu Asn Val Leu			
180	185	190	
Lys Cys Pro Thr Pro Gly Cys Thr Gly Gln Gly His Val Asn Ser Asn			
195	200	205	
Arg Asn Thr His Arg Ser Leu Ser Gly Cys Pro Ile Ala Ala Ala Glu			
210	215	220	
Lys Leu Ala Lys Ser His Glu Lys Gln Gln Pro Gln Thr Gly Asp Pro			
225	230	235	240
Ser Lys Ser Ser Ser Asn Ser Asp Arg Ile Leu Arg Pro Met Cys Phe			
245	250	255	
Val Lys Gln Leu Glu Val Pro Pro Tyr Gly Ser Tyr Arg Pro Asn Val			
260	265	270	
Ala Pro Ala Thr Pro Arg Ala Asn Leu Ala Lys Glu Leu Glu Lys Phe			
275	280	285	
Ser Lys Val Thr Phe Asp Tyr Ala Ser Phe Asp Ala Gln Val Phe Gly			
290	295	300	
Lys Arg Met Leu Ala Pro Lys Ile Gln Thr Ser Glu Thr Ser Pro Lys			
305	310	315	320
Ala Phe Gln Cys Phe Asp Tyr Ser Gln Asp Ala Glu Ala Ala His Met			
325	330	335	
Ala Ala Thr Ala Ile Leu Asn Leu Ser Thr Arg Cys Trp Glu Met Pro			
340	345	350	
Glu Asn Leu Ser Thr Lys Pro Gln Asp Leu Pro Ser Lys Ser Val Asp			
355	360	365	
Ile Glu Val Asp Glu Asn Gly Thr Leu Asp Leu Ser Met His Lys His			
370	375	380	
Arg Lys Arg Glu Asn Ala Phe Pro Ser Ser Ser Ser Cys Ser Ser Ser			
385	390	395	400
Pro Gly Val Lys Ser Pro Asp Ala Ser Gln Arg His Ser Ser Thr Ser			
405	410	415	
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&lt;210&gt; 4206

&lt;211&gt; 829

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 4206

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&lt;210&gt; 4204

&lt;211&gt; 80

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 4204

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Tyr	Thr	Val	Val	Pro	Phe	Val	Leu	Leu	Ser	Ile	Lys	Pro	Ser	Leu	Thr
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Phe	Tyr	Ser	Ser	Trp	Tyr	Tyr	Cys	Leu	His	Ile	Leu	Gly	Ile	Leu	Val
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&lt;210&gt; 4205

&lt;211&gt; 6523

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 4205

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Leu	Ser	Ile	Met	Leu	Leu	Pro	Glu	Thr	Lys	Arg	Lys	Leu	Leu	Pro Glu
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Val	Leu	Arg	Asp	Gly	Glu	Leu	Cys	Arg	Arg	Pro	Ser	Leu	Leu	Arg Gln
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Pro	Thr	Pro	Thr	Arg	Cys	Asp	His	Val	Pro	Leu	Leu	Ala	Thr	Pro Asn
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Pro	Ala	Leu												

&lt;210&gt; 4203

&lt;211&gt; 1368

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 4203

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 Ile Leu Gly Phe Thr Asn Phe Ile Ala His Ala Ile Arg His Cys Tyr  
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&lt;210&gt; 4200

&lt;211&gt; 186

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 4200

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Ser	Ile	Ser	Cys	Lys	Glu	Lys	Asp	Asn	Ile	Asp	Ile	Thr	Leu	Gln	Trp
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Leu	Ile	Gln	His	Ser	Lys	Ser	Arg	Arg	Ser						
		180					185								

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His Cys Ala Met Gly Val Ser Arg Ser Ala Thr Leu Val Leu Ala Phe
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Leu Met Ile Tyr Glu Asn Met Thr Leu Val Glu Ala Ile Gln Thr Val
                275                280                285
Gln Ala His Arg Asn Ile Cys Pro Asn Ser Gly Phe Leu Arg Gln Leu
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305                310                315

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&lt;210&gt; 4197

&lt;211&gt; 597

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 4197

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&lt;210&gt; 4198

&lt;211&gt; 148

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 4198

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Asn Trp Ser Ser Ala Arg Asn Ser Ala Ser Ala Ala Glu Ala Arg Ser
20                25                30
Met Ala Leu Pro Thr Gln Ala Gln Val Val Ile Cys Gly Gly Gly Ile
35                40                45
Thr Gly Thr Ser Val Ala His His Gln Ser Lys Met Gly Trp Lys Asp
50                55                60
Ile Val Leu Leu Glu Gln Gly Arg Leu Ala Ala Gly Ser Thr Arg Phe
65                70                75                80
Cys Ala Gly Ile Leu Ser Thr Ala Arg His Leu Thr Ile Glu Gln Lys

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&lt;211&gt; 318

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 4196

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Phe	Ala	Thr	Leu	Ala	Leu	Ile	Leu	Leu	Val	Leu	Leu	Glu	Ala	Leu	Ala
			35				40						45		
Gln	Ala	Asp	Thr	Gln	Lys	Met	Val	Glu	Ala	Gln	Arg	Gly	Val	Gly	Pro
			50			55					60				
Arg	Ala	Cys	Tyr	Ser	Ile	Trp	Leu	Leu	Leu	Ala	Pro	Thr	Pro	Pro	Leu
65					70					75					80
Ser	His	Cys	Leu	Gln	Ser	Pro	Gln	Lys	Gln	His	Gln	Val	Cys	Gly	Asp
			85						90					95	
Arg	Arg	Leu	Lys	Ala	Ser	Ser	Thr	Asn	Cys	Pro	Ser	Glu	Lys	Cys	Thr
			100					105						110	
Ala	Trp	Ala	Arg	Tyr	Ser	His	Arg	Met	Asp	Ser	Leu	Gln	Lys	Gln	Asp
			115				120						125		
Leu	Arg	Arg	Pro	Lys	Ile	His	Gly	Ala	Val	Gln	Ala	Ser	Pro	Tyr	Gln
			130			135						140			
Pro	Pro	Thr	Leu	Ala	Ser	Leu	Gln	Arg	Leu	Leu	Trp	Val	Arg	Gln	Ala
145					150					155					160
Ala	Thr	Leu	Asn	His	Ile	Asp	Glu	Val	Trp	Pro	Ser	Leu	Phe	Leu	Gly
			165						170					175	
Asp	Ala	Tyr	Ala	Ala	Arg	Asp	Lys	Ser	Lys	Leu	Ile	Gln	Leu	Gly	Ile
			180				185						190		
Thr	His	Val	Val	Asn	Ala	Ala	Ala	Gly	Lys	Phe	Gln	Val	Asp	Thr	Gly
			195				200						205		
Ala	Lys	Phe	Tyr	Arg	Gly	Met	Ser	Leu	Glu	Tyr	Tyr	Gly	Ile	Glu	Ala
			210			215						220			
Asp	Asp	Asn	Pro	Phe	Phe	Asp	Leu	Ser	Val	Tyr	Phe	Leu	Pro	Val	Ala
225					230					235					240
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```

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Glu Arg Glu Ala Ser Pro Ser Asn Ser Cys Gln Asp Ser Thr Asp Thr
385          390          395          400
Glu Ser Asn Asn Glu Glu Gln Arg Ser Gly Leu Ile Tyr Leu Thr Asn
          405          410          415
His Ile Ala Pro His Ala Arg Asn Gly Leu Ser Leu Lys Glu Glu His
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Arg Ala Tyr Asp Leu Leu Arg Ala Ala Ser Glu Asn Ser Gln Asp Ala
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Leu Arg Val Val Ser Thr Ser Gly Glu Gln Met Lys Val Tyr Lys Cys
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Glu His Cys Arg Val Leu Phe Leu Asp His Val Met Tyr Thr Ile His
465          470          475          480
Met Gly Cys His Gly Phe Arg Asp Pro Phe Glu Cys Asn Met Cys Gly
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Tyr His Ser Gln Asp Arg Tyr Glu Phe Ser Ser His Ile Thr Arg Gly
          500          505          510
Glu His Arg Phe His Met Ser
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&lt;210&gt; 4195

&lt;211&gt; 1200

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 4195

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<400> 4194  
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 35 40 45  
 Ser Asp Arg Val Val Ala Ser Asn Val Lys Val Glu Thr Gln Ser Asp  
 50 55 60  
 Glu Glu Asn Gly Arg Ala Cys Glu Met Asn Gly Glu Glu Cys Ala Glu  
 65 70 75 80  
 Asp Leu Arg Met Leu Asp Ala Ser Gly Glu Lys Met Asn Gly Ser His  
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 Arg Asp Gln Gly Ser Ser Ala Leu Ser Gly Val Gly Gly Ile Arg Leu  
 100 105 110  
 Pro Asn Gly Lys Leu Lys Cys Asp Ile Cys Gly Ile Ile Cys Ile Gly  
 115 120 125  
 Pro Asn Val Leu Met Val His Lys Arg Ser His Thr Gly Glu Arg Pro  
 130 135 140  
 Phe Gln Cys Asn Gln Cys Gly Ala Ser Phe Thr Gln Lys Gly Asn Leu  
 145 150 155 160  
 Leu Arg His Ile Lys Leu His Ser Gly Glu Lys Pro Phe Lys Cys His  
 165 170 175  
 Leu Cys Asn Tyr Ala Cys Arg Arg Arg Asp Ala Leu Thr Gly His Leu  
 180 185 190  
 Arg Thr His Ser Val Gly Lys Pro His Lys Cys Gly Tyr Cys Gly Arg  
 195 200 205  
 Ser Tyr Lys Gln Arg Ser Ser Leu Glu Glu His Lys Glu Arg Cys His  
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 Asn Tyr Leu Glu Ser Met Gly Leu Pro Gly Thr Leu Tyr Pro Val Ile  
 225 230 235 240  
 Lys Glu Glu Thr Asn His Ser Glu Met Ala Glu Asp Leu Cys Lys Ile  
 245 250 255  
 Gly Ser Glu Arg Ser Leu Val Leu Asp Arg Leu Ala Ser Asn Val Ala  
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&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 4193

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1020  
gacaagggcc tgtccgacac gccctacgac agcagcgcca gctacgagaa ggagaacgaa  
1080  
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1140  
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1440  
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1500

115 120 125  
 Cys Leu Tyr Thr Leu Gly Tyr Pro Pro Ala Gln Ala Gln Gly Leu His  
 130 135 140  
 Val Thr Ser Ile Ser Trp Asn Ser Thr Gly Ser Val Val Ala Cys Ala  
 145 150 155 160  
 Tyr Gly Arg Leu Asp His Gly Asp Trp Ser Thr Leu Lys Ser Phe Val  
 165 170 175  
 Cys Ala Trp Asn Leu Asp Arg Arg Asp Leu Arg Pro Gln Gln Pro Ser  
 180 185 190  
 Ala Val Val Glu Val Pro Ser Ala Val Leu Cys Leu Ala Phe His Pro  
 195 200 205  
 Thr Gln Pro Ser His Val Ala Gly Gly Leu Tyr Ser Gly Glu Val Leu  
 210 215 220  
 Val Trp Asp Leu Ser Arg Leu Glu Asp Pro Leu Leu Trp Arg Thr Gly  
 225 230 235 240  
 Leu Thr Asp Asp Thr His Thr Asp Pro Val Ser Gln Val Val Trp Leu  
 245 250 255  
 Pro Glu Pro Gly His Ser His Arg Phe Gln Val Leu Ser Val Ala Thr  
 260 265 270  
 Asp Gly Lys Val Leu Leu Trp Gln Gly Ile Gly Val Gly Gln Leu Gln  
 275 280 285  
 Leu Thr Glu Gly Phe Ala Leu Val Met Gln Gln Leu Pro Arg Ser Thr  
 290 295 300  
 Lys Leu Lys Lys His Pro Arg Gly Glu Thr Glu Val Gly Ala Thr Ala  
 305 310 315 320  
 Val Ala Phe Ser Ser Phe Asp Pro Arg Leu Phe Ile Leu Gly Thr Glu  
 325 330 335  
 Gly Gly Phe Pro Leu Lys Cys Ser Leu Ala Ala Gly Glu Ala Ala Leu  
 340 345 350  
 Thr Arg Met Pro Ser Ser Val Pro Leu Arg Ala Pro Ala Gln Phe Thr  
 355 360 365  
 Phe Ser Pro His Gly Gly Pro Ile Tyr Ser Val Ser Cys Ser Pro Phe  
 370 375 380  
 His Arg Asn Leu Phe Leu Ser Ala Gly Thr Asp Gly His Val His Leu  
 385 390 395 400  
 Tyr Ser Met Leu Gln Ala Pro Pro Leu Thr Ser Leu Gln Leu Ser Leu  
 405 410 415  
 Lys Tyr Leu Phe Ala Val Arg Trp Ser Pro Val Arg Pro Leu Val Phe  
 420 425 430  
 Ala Ala Ala Ser Gly Lys Gly Asp Val Gln Leu Phe Asp Leu Gln Lys  
 435 440 445  
 Ser Ser Gln Lys Pro Thr Val Leu Ile Lys Gln Thr Gln Asp Glu Ser  
 450 455 460  
 Pro Val Tyr Cys Leu Glu Phe Asn Ser Gln Gln Thr Gln Leu Leu Ala  
 465 470 475 480  
 Ala Gly Asp Ala Gln Gly Thr Val Lys Val Trp Gln Leu Ser Thr Glu  
 485 490 495  
 Phe Thr Glu Gln Gly Pro Arg Glu Ala Glu Asp Leu Asp Cys Leu Ala  
 500 505 510  
 Ala Glu Val Ala Ala  
 515

&lt;210&gt; 4193

&lt;211&gt; 6439



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 960  
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 1560  
 ccgggaggcg ggtgcaagcc ttcgctgtgc cgagccttgt gtttctgacg caagccaat  
 1620  
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 1661

&lt;210&gt; 4192

&lt;211&gt; 517

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 4192

Xaa Pro Ala Thr Val Gly Val Ala Ser Gly Pro Gly Pro Gly Arg Pro  
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 Gly Pro Leu Gln Asp Glu Thr Leu Gly Val Ala Ser Val Pro Ser Gln  
 20 25 30  
 Trp Arg Ala Val Gln Gly Ile Arg Gly Glu Thr Lys Ser Cys Gln Thr  
 35 40 45  
 Ala Ser Ile Ala Thr Ala Ser Ala Ser Ala Gln Ala Arg Asn His Val  
 50 55 60  
 Asp Ala Gln Val Gln Thr Glu Ala Pro Val Pro Val Ser Val Gln Pro  
 65 70 75 80  
 Pro Ser Gln Tyr Asp Ile Pro Arg Leu Ala Ala Phe Leu Arg Arg Val  
 85 90 95  
 Glu Ala Met Val Ile Arg Glu Leu Asn Lys Asn Trp Gln Ser His Ala  
 100 105 110  
 Phe Asp Gly Phe Glu Val Asn Trp Thr Glu Gln Gln Gln Met Val Ser

340	345	350
Ala Leu Lys Arg Pro Phe Glu Asp Gly Leu Gly Asp Asp Lys Asp Pro		
355	360	365
Asn Lys Lys Met Lys Arg Asn Leu Arg Lys Ile Leu Asp Ser Lys Ala		
370	375	380
Ile Asp Leu Met Asn Ala Leu Met Arg Leu Asn Gln Ile Arg Pro Gly		
385	390	395
Leu Gln Tyr Lys Leu Leu Ser Gln Ser Gly Pro Val His Ala Pro Val		
405	410	415
Phe Thr Met Ser Val Asp Val Asp Gly Thr Thr Tyr Glu Ala Ser Gly		
420	425	430
Pro Ser Lys Lys Thr Ala Lys Leu His Val Ala Val Lys Val Leu Gln		
435	440	445
Ala Met Gly Tyr Pro Thr Gly Phe Asp Ala Asp Ile Glu Cys Met Ser		
450	455	460
Ser Asp Glu Lys Arg Arg Gly Leu Lys Tyr Glu Leu Ile Ser Glu Thr		
465	470	475
Gly Gly Ser His Asp Lys Arg Phe Val Met Glu Val Glu Val Asp Gly		
485	490	495
Gln Lys Phe Arg Gly Ala Gly Pro Asn Lys Lys Val Ala Lys Ala Ser		
500	505	510
Ala Ala Leu Leu Ala Xaa Gly Glu Thr Val Phe		
515	520	

&lt;210&gt; 4191

&lt;211&gt; 1661

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 4191

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 gacgagaccc tgggtgtggc gtccgtgccc tcgcagtggg gggccgtcca gggcatccgc  
 120  
 ggggagacga aaagttgccg gacggccagc attgccactg ccagtgcacg cggccaggcc  
 180  
 aggaatcatg tggacgcca ggtgcagacg gaggcccccg tgcctgtcag cgtgcagccc  
 240  
 ccgtcccagt acgacatacc caggtctgca gcctttcttc ggagagtggg ggccatggtc  
 300  
 atccgagagc tgaacaagaa ttggcagagc cacgcgtttg atggcttcga ggtgaactgg  
 360  
 accgagcagc agcagatggg gtcttgtctg tataccctgg gctaccgcc agcccaagcg  
 420  
 cagggtctgc atgtgaccag catctcctgg aactccactg gctctgtggg ggctgtgccc  
 480  
 tacggccggc tggaccatgg ggactggagc acgcttaagt ccttcgtgtg tgcctggaac  
 540  
 ctggaccggc gagacctgcg tccccagcaa ccgtcggccg tggaggagg cccagcgct  
 600  
 gtccctgtgc tggccttcca cccacgcag ccctcccacg tcgcaggagg gctgtacagt  
 660  
 ggtgaggtgt tgggtgtggg cctgagccgt cttgaggacc cgctgtgtg gcgcacaggc  
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 1560  
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 1570

<210> 4190

<211> 523

<212> PRT

<213> Homo sapiens

<400> 4190

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His	Ser	Thr	Ile	Tyr	Pro	Ser	Pro	Glu	Leu	Glu	Ala	Val	Gln	Asn	
			20					25				30			
Met	Val	Ser	Thr	Val	Glu	Cys	Ala	Leu	Lys	His	Val	Ser	Asp	Trp	Leu
		35					40					45			
Asp	Glu	Thr	Asn	Lys	Gly	Thr	Lys	Thr	Glu	Gly	Glu	Thr	Glu	Val	Lys
	50					55					60				
Lys	Asp	Glu	Ala	Gly	Glu	Asn	Tyr	Ser	Lys	Asp	Gln	Gly	Gly	Arg	Thr
65					70				75					80	
Leu	Cys	Gly	Val	Met	Arg	Ile	Gly	Leu	Val	Ala	Lys	Gly	Leu	Leu	Ile
				85					90					95	
Lys	Asp	Asp	Met	Asp	Leu	Glu	Leu	Val	Leu	Met	Cys	Lys	Asp	Lys	Pro
			100					105					110		
Thr	Glu	Thr	Leu	Leu	Asn	Thr	Val	Lys	Asp	Asn	Leu	Pro	Ile	Gln	Ile
		115					120					125			
Gln	Lys	Leu	Thr	Glu	Glu	Lys	Tyr	Gln	Val	Glu	Gln	Cys	Val	Asn	Glu
	130					135					140				
Ala	Ser	Ile	Ile	Ile	Arg	Asn	Thr	Lys	Glu	Pro	Thr	Leu	Thr	Leu	Lys
145					150				155					160	
Val	Ile	Leu	Thr	Ser	Pro	Leu	Ile	Arg	Asp	Glu	Leu	Glu	Lys	Lys	Asp
				165					170					175	
Gly	Glu	Asn	Val	Ser	Met	Lys	Asp	Pro	Pro	Asp	Leu	Leu	Asp	Arg	Gln
		180						185					190		
Lys	Cys	Leu	Asn	Ala	Leu	Ala	Ser	Leu	Arg	His	Ala	Lys	Trp	Phe	Gln
		195					200					205			
Ala	Arg	Ala	Asn	Gly	Leu	Lys	Ser	Cys	Val	Ile	Val	Leu	Arg	Ile	Leu
	210					215					220				
Arg	Asp	Leu	Cys	Asn	Arg	Val	Pro	Thr	Trp	Ala	Pro	Leu	Lys	Gly	Trp
225					230					235				240	
Pro	Leu	Glu	Leu	Ile	Cys	Glu	Lys	Ser	Ile	Gly	Thr	Cys	Asn	Arg	Pro
			245						250					255	
Leu	Gly	Ala	Gly	Glu	Ala	Leu	Arg	Arg	Val	Met	Glu	Cys	Leu	Ala	Ser
		260					265						270		
Gly	Ile	Leu	Leu	Pro	Gly	Gly	Pro	Gly	Leu	His	Asp	Pro	Cys	Glu	Arg
	275						280					285			
Asp	Pro	Thr	Asp	Ala	Leu	Ser	Tyr	Met	Thr	Ile	Gln	Gln	Lys	Glu	Asp
	290					295					300				
Ile	Thr	His	Ser	Ala	Gln	His	Ala	Leu	Arg	Leu	Ser	Ala	Phe	Gly	Gln
305					310					315				320	
Ile	Tyr	Lys	Val	Leu	Glu	Met	Asp	Pro	Leu	Pro	Ser	Ser	Lys	Pro	Phe
			325						330					335	
Gln	Lys	Tyr	Ser	Trp	Ser	Val	Thr	Asp	Lys	Glu	Gly	Ala	Gly	Ser	Ser

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 4189

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tatccatctc cggaggaact tgaagctgtt cagaatatgg tatctactgt tgaatgtgct  
120  
cttaaacatg tctcagattg gttggatgaa acaataaaag gcacaaaaac agaggggtgag  
180  
acagaagtga agaaagatga ggccggagaa aactattcca aggatcaagg tggcgggaca  
240  
ttgtgtggtg taatgaggat tggcctgggt gcaaaaggct tgctgattaa agatgatatg  
300  
gacttggagc tggttttaat gtgcaaagac aaacccacag agaccctgtt aaatacagtc  
360  
aaagataatc ttcctattca gattcagaaa ctacagaaag agaaatatca agtggaaaca  
420  
tgtgtaaatg aggcattctat tataattcgg aatacaaaag agcccacgct aactttgaag  
480  
gtgatactta cctcacctct aattagggac gaattggaga agaaggatgg agaaaatgtt  
540  
tcgatgaaag atcctccgga cttattggac aggcagaaat gcctgaacgc cttggcgtct  
600  
cttcgacatg ccaaatgggt tcaggcaagg gcaaatggat taaaatcatg tgtaattgtc  
660  
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720  
ccactagaac ttatatgtga aaagtctata ggtacttgta atagaccttt gggcgtggtg  
780  
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840  
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900  
caaaaagaag atattacca cagtgcacag catgcactca gactatcagc ctttggtcag  
960  
atttacaag tgctggagat ggaccccctt ccatctagta agccttttca gaagtattcc  
1020  
tggtcagtta ctgataaaga aggtgctggg tcttcagctc taaagaggcc atttgaagat  
1080  
ggattagggg atgataaaga cccaacaag aagatgaaac gaaacttaag gaaaattctg  
1140  
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cttcagtata agctcctatc tcagtctggc cccgttcag cccagctctt cacaatgtct  
1260  
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1320  
cacgtagcgg tgaaggattt gcaggcaatg ggatatcaa caggcttga tgcagatatt  
1380  
gaatgtatga gttccgatga aaaaagaaga ggtctcaagt atgaactcat ctacagagact  
1440  
gggtgaagcc atgacaagcg ctttgtaatg gaggtagaag tagatggaca gaaattcaga  
1500

acccacaggg atcgctaaga caccctgtgta ggaaactcca aggctggcgt gcctgggtgt  
 900  
 gcacacatcc tagcctatgg aacatgggca cctagatgct gcttcattca tctgtcaagc  
 960  
 tattcctatg taaaggcatg tgccgcagtg aagaaaacag tataattaag aaggggtccc  
 1020  
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 1080  
 atcatga  
 1087

<210> 4188

<211> 272

<212> PRT

<213> Homo sapiens

<400> 4188

Xaa	Ala	Ile	Asp	Arg	Ala	Cys	Pro	Glu	Ser	Ala	Ser	Leu	Leu	Gly	His
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Pro	Arg	Val	Leu	Ala	Asp	Ser	Phe	Pro	Asp	Ser	Ser	Pro	Tyr	Glu	Gly
		20						25					30		
Tyr	Asn	Tyr	Gly	Ser	Phe	Glu	Asn	Val	Ser	Gly	Ser	Thr	Asp	Gly	Leu
		35					40					45			
Val	Asp	Ser	Ala	Gly	Thr	Gly	Asp	Leu	Ser	Tyr	Gly	Tyr	Gln	Gly	Arg
	50					55					60				
Ser	Phe	Glu	Pro	Val	Gly	Thr	Arg	Pro	Arg	Val	Asp	Ser	Met	Ser	Ser
65					70					75				80	
Val	Glu	Glu	Asp	Asp	Tyr	Asp	Thr	Leu	Thr	Asp	Ile	Asp	Ser	Asp	Lys
			85						90					95	
Asn	Val	Ile	Arg	Thr	Lys	Gln	Tyr	Leu	Tyr	Val	Ala	Asp	Leu	Ala	Arg
		100					105						110		
Lys	Asp	Lys	Arg	Val	Leu	Arg	Lys	Tyr	Gln	Ile	Tyr	Phe	Trp	Asn	
		115					120					125			
Ile	Ala	Thr	Ile	Ala	Val	Phe	Tyr	Ala	Leu	Pro	Val	Val	Gln	Leu	Val
	130					135						140			
Ile	Thr	Tyr	Pro	Glu	Xaa	Gly	Gly	Cys	Thr	Arg	Gly	Ser	Arg	Asp	Ile
145				150					155					160	
Cys	Ser	Ser	Asn	Phe	Leu	Cys	Ala	His	Pro	Leu	Gly	Asn	Leu	Ser	Ala
			165					170						175	
Phe	Asn	Asn	Ile	Leu	Ser	Asn	Leu	Gly	Tyr	Ile	Leu	Leu	Gly	Leu	Leu
		180					185						190		
Phe	Leu	Leu	Ile	Ile	Leu	Gln	Arg	Glu	Ile	Asn	His	Asn	Arg	Ala	Leu
		195					200						205		
Leu	Arg	Asn	Asp	Leu	Cys	Ala	Leu	Glu	Cys	Gly	Ile	Pro	Lys	His	Phe
	210					215					220				
Gly	Leu	Phe	Tyr	Ala	Met	Gly	Thr	Ala	Leu	Met	Met	Glu	Gly	Leu	Leu
225				230					235					240	
Ser	Ala	Cys	Tyr	His	Val	Cys	Pro	Asn	Tyr	Thr	Asn	Phe	Gln	Phe	Gly
			245						250					255	
Glu	Trp	Gly	Val	Leu	Leu	Phe	Trp	Leu	Asn	Leu	Gln	Gln	Gly	Pro	Ala
		260					265						270		

<210> 4189

<211> 1570

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 Tyr Glu Thr Leu Lys Asn Ala Trp Leu Gln His Tyr Ala Val Asn Ser  
 275 280 285  
 Ala Asp Pro Gly Val Phe Val Leu Leu Ala Cys Gly Thr Met Ser Ser  
 290 295 300  
 Thr Cys Gly Gln Leu Ala Ser Tyr Pro Leu Ala Leu Val Arg Thr Arg  
 305 310 315 320  
 Met Gln Ala Gln Ala Ser Ile Glu Gly Ala Pro Glu Val Thr Met Ser  
 325 330 335  
 Ser Leu Phe Lys His Ile Leu Arg Thr Glu Gly Ala Phe Gly Leu Tyr  
 340 345 350  
 Arg Gly Leu Ala Pro Asn Phe Met Lys Val Ile Pro Ala Val Ser Ile  
 355 360 365  
 Ser Tyr Val Val Tyr Glu Asn Leu Lys Ile Thr Leu Gly Val Gln Ser  
 370 375 380  
 Arg  
 385

&lt;210&gt; 4187

&lt;211&gt; 1087

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 4187

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 gctgattctt ttcctgacag ttccccttat gaggggtaca actatggctc ctttgagaat  
 120  
 gtttctggat ctaccgatgg tctggttgac agcgtggca ctggggacct ctcttacggt  
 180  
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 240  
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 300  
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 360  
 aagtaccaga tctacttctg gaacattgcc accattgctg tcttctatgc ccttctgtg  
 420  
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 480  
 tgctctcna acttctctg cgcacacca ctgggcaatc tcagcgcctt caacaacatc  
 540  
 ctacgcaacc tggggtacat cctgctgggg ctgcttttcc tgctcatcat cctgcaacgg  
 600  
 gagatcaacc acaaccgggc cctgctgcgc aatgacctct gtgccctgga atgtgggatc  
 660  
 cccaaacact ttgggctttt ctacgccatg ggcacagccc tgatgatgga ggggctgctc  
 720  
 agtgcttct atcatgtgtg cccaactat accaatttcc agtttgggtga gtggggcgctc  
 780  
 cttcttttct ggctcaacct acagcagga cctgcctgag tccttacta tccccaagtc  
 840

catatcctgc ggaccgaggg ggccttcggg ctgtacaggg ggctggcccc caacttcatg  
 1080  
 aagggtcatcc cagctgtgag catcagctac gtgggtctacg agaacctgaa gatcacccctg  
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 1200  
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 1481

<210> 4186

<211> 385

<212> PRT

<213> Homo sapiens

<400> 4186

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Gln	Glu	Ile	Met	Gln	Ser	Leu	Arg	Asp	Leu	Gly	Val	Lys	Ile	Ser	Glu
			20					25				30			
Gln	Gln	Ala	Glu	Lys	Ile	Leu	Lys	Ser	Met	Asp	Lys	Asn	Gly	Thr	Met
		35					40					45			
Thr	Ile	Asp	Trp	Asn	Glu	Trp	Arg	Asp	Tyr	His	Leu	Leu	His	Pro	Val
	50				55						60				
Glu	Asn	Ile	Pro	Glu	Ile	Ile	Leu	Tyr	Trp	Lys	His	Ser	Thr	Ile	Phe
65				70					75					80	
Asp	Val	Gly	Glu	Asn	Leu	Thr	Val	Pro	Asp	Glu	Phe	Thr	Val	Glu	Glu
			85					90					95		
Arg	Gln	Thr	Gly	Met	Trp	Trp	Arg	His	Leu	Val	Ala	Gly	Gly	Gly	Ala
	100						105					110			
Gly	Ala	Val	Ser	Arg	Thr	Cys	Thr	Ala	Pro	Leu	Asp	Arg	Leu	Lys	Val
	115				120						125				
Leu	Met	Gln	Val	His	Ala	Ser	Arg	Ser	Asn	Asn	Met	Gly	Ile	Val	Gly
	130				135						140				
Gly	Phe	Thr	Gln	Met	Ile	Arg	Glu	Gly	Gly	Ala	Arg	Ser	Leu	Trp	Arg
145			150					155					160		
Gly	Asn	Gly	Ile	Asn	Val	Leu	Lys	Ile	Ala	Pro	Glu	Ser	Ala	Ile	Lys
			165					170					175		
Phe	Met	Ala	Tyr	Glu	Gln	Ile	Lys	Arg	Leu	Val	Gly	Ser	Asp	Gln	Glu
	180						185					190			
Thr	Leu	Arg	Ile	His	Glu	Arg	Leu	Val	Ala	Gly	Ser	Leu	Ala	Gly	Ala
	195				200						205				
Ile	Ala	Gln	Ser	Ser	Ile	Tyr	Pro	Met	Glu	Val	Leu	Lys	Thr	Arg	Met
	210				215						220				
Ala	Leu	Arg	Lys	Thr	Gly	Gln	Tyr	Ser	Gly	Met	Leu	Asp	Cys	Ala	Arg
225			230					235					240		
Arg	Ile	Leu	Ala	Arg	Glu	Gly	Val	Ala	Ala	Phe	Tyr	Lys	Gly	Tyr	Val

275	280	285
Ser Gln Gln Glu Gln Thr	Ala Phe Leu Pro Ala	Asn Gln Val Pro Val
290	295	300
Leu Gln Gln Asn Thr Ser	Val Ala Thr Lys Gln	Pro Gln Thr Ser Val
305	310	315
Val Gln Asn Gln Gln Gln	Ile Ser Gln Gln Gly	Pro Ile Tyr Asp Glu
325	330	335
Val Glu Leu Asp Ala Leu	Ala Glu Ile Glu Arg	Ile Glu Arg Glu Ser
340	345	350
Ala Ile Glu Arg Glu Arg	Phe Ser Lys Glu Val	Gln Asp Lys Asp Lys
355	360	365
Pro Leu Lys Lys Lys		
370		

&lt;210&gt; 4185

&lt;211&gt; 1481

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 4185

```

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60
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120
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180
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300
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360
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420
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480
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540
gagcagatca agcgccttgt tggtagtac caggagactc tgaggattca cgagaggctt
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720
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780
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900
accatgtcca gtacctgtg ccagctggcc agctaccccc tggccctagt caggacccgg
960
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1020

```



gtcctcactt gaaccatgtc taggattatc agcatgatga ttagctgaat tgccagacaa  
 840  
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 900  
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 960  
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 1020  
 aaatctgttc ccagagcttg tctgtggtgg cacaaaccgg ctggaggggc tatgtgagat  
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 1129

<210> 4184

<211> 374

<212> PRT

<213> Homo sapiens

<400> 4184

Met	His	Ser	Ser	Pro	Ala	Ser	Ser	Asn	Tyr	Gln	Gln	Thr	Thr	Ile	Ser
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His	Ser	Pro	Ser	Ser	Arg	Phe	Val	Pro	Pro	Gln	Thr	Ser	Ser	Gly	Asn
		20						25					30		
Arg	Phe	Met	Pro	Gln	Gln	Asn	Ser	Pro	Val	Pro	Ser	Pro	Tyr	Ala	Pro
		35				40						45			
Gln	Ser	Pro	Ala	Gly	Tyr	Met	Pro	Tyr	Ser	His	Pro	Ser	Ser	Tyr	Thr
	50					55				60					
Thr	His	Pro	Gln	Met	Gln	Gln	Ala	Ser	Val	Ser	Ser	Pro	Ile	Val	Ala
65					70					75				80	
Gly	Gly	Leu	Arg	Asn	Ile	His	Asp	Asn	Lys	Val	Ser	Gly	Pro	Leu	Ser
			85					90					95		
Gly	Asn	Ser	Ala	Asn	His	His	Ala	Asp	Asn	Pro	Arg	His	Gly	Ser	Ser
	100							105					110		
Glu	Asp	Tyr	Leu	His	Met	Val	His	Arg	Leu	Ser	Ser	Asp	Asp	Gly	Asp
	115					120						125			
Ser	Ser	Thr	Met	Arg	Asn	Ala	Ala	Ser	Phe	Pro	Leu	Arg	Ser	Pro	Gln
	130					135					140				
Pro	Val	Cys	Ser	Pro	Ala	Gly	Ser	Glu	Gly	Thr	Pro	Lys	Gly	Ser	Arg
145					150					155				160	
Pro	Pro	Leu	Ile	Leu	Gln	Ser	Gln	Ser	Leu	Pro	Cys	Ser	Ser	Pro	Arg
			165					170						175	
Asp	Val	Pro	Pro	Asp	Ile	Leu	Leu	Asp	Ser	Pro	Glu	Arg	Lys	Gln	Lys
	180							185					190		
Lys	Gln	Lys	Lys	Met	Lys	Leu	Gly	Lys	Asp	Glu	Lys	Glu	Gln	Ser	Glu
	195					200						205			
Lys	Ala	Ala	Met	Tyr	Asp	Ile	Ile	Ser	Ser	Pro	Ser	Lys	Asp	Ser	Thr
	210					215						220			
Lys	Leu	Thr	Leu	Arg	Leu	Ser	Arg	Val	Arg	Ser	Ser	Asp	Met	Asp	Gln
225					230					235				240	
Gln	Glu	Asp	Met	Leu	Ser	Gly	Met	Glu	Asn	Ser	Asn	Val	Ser	Glu	Asn
			245					250						255	
Asp	Ile	Pro	Phe	Asn	Val	Gln	Tyr	Gln	Gly	Gln	Thr	Ser	Lys	Thr	Pro
	260							265					270		
Ile	Thr	Pro	Gln	Asp	Val	Asn	Arg	Pro	Leu	Asn	Ala	Ala	Gln	Cys	Leu

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<210> 4183
<211> 1129
<212> DNA
<213> Homo sapiens
```

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120
atatataggt ccctgttgtg atatctgttg ttgattctgt accacagaag tctgggggtg
180
ttttgtagca actgaagtgt tctgttgtaa aacaggcact tgatttgctg gaaggaatgc
240
tgtttgttct tgctgcgaca aacattgagc agcattaagt gggcggttta cgtcctgtgg
300
agtaatgggt gtttttgaag tctgtccttg atactgcaca ttaaaaggaa tatcattttc
360
tgaaacattg ctattttcca taccagatag catatcctct tgctggtcca tatccgaaga
420
ccttacacga gaaagtctta atgtaagttt agtagagtcc ttggatggag aactaattat
480
atcatacatt gccgctttct cactctgctc tttttcatcc ttgcctaatt tcattttctt
540
ctgcttcttt tgttttcttt ctggagaatc tagcaagata tctggtggaa catctcgagg
600
tgatgaacaa ggtagagact gagattgtag gattaaaggt ggtcttgagc ctttaggagt
660
tccttcactt ccagcagggg agcatactgg ctgtggagat ctcaagggaa aagatgcagc
720
attcctcatt gttgaagaat ctccatcgtc actacttagc ctgtgcacca tgtgtaggta
780

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<210> 4181
<211> 735
<212> DNA
<213> Homo sapiens
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<400> 4181
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120
ttctcaactgc tgttcagcaa tatgtctcct ttaaaatagc acccggcggg gatagagttc
180
tctctgtgtc tgctgtttgc caagctggtc agttacacct tcctctactg gctgccctg
240
tacatcgcca atgtggctca ctttagtgcc aaggaggctg gggacctgtc tacactcttc
300
gatgttggtg gcatcatagg cggcatcgtg gcagggctcg tctctgacta caccaatggc
360
agggccacca cttgctgtgt catgtctcct ttggctgcc ccatgatgtt cctgtacaac
420
tacattggcc aggacgggat tgccagctcc atagtgatgc tgatcatctg tgggggacctg
480
gtcaatggcc catacgccnt catcaccact gctgtctctg ctgacctggg gactcacaag
540
agcctgaagg gcaacgcca agccctgtcc acggtcacgg ccatcattga cggcacccggc
600
tccataggtg cggtctctgg gctctgtctg gctgggctca tctcccccac gggctggaac
660
aatgtcttct acatgctcat ctctgccgac gtcctagcct gcttgtctct ttgccggtta
720
gtatacaaag agatc
735

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<210> 4182
<211> 192
<212> PRT
<213> Homo sapiens
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<400> 4182
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 1             5             10             15
Val Ser Tyr Thr Phe Leu Tyr Trp Leu Pro Leu Tyr Ile Ala Asn Val

```

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 1560  
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 1620  
 aaaggaaggt ggccagcgtg aggattccat tcaccttgta cagaaggggtg tgctgtgtgt  
 1680  
 ttagctgaat cagaaccctg cccagcgaca caaacggagt gctcagttct gccgtgaaga  
 1740  
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 1800  
 caaagagaat gaccgcatga tgtgtgatca tgaggcgggt tcgacttagg aagtttcgaa  
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 1920  
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 1980  
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 2040  
 gcacggcgtg caccgaggaa accagcctgg tgctgatcat cacgcagtcg gtgcgggtcc  
 2100  
 atccgggctg ggagcggcgc agcgcccagg tgcagagcgc gaagagcccc gggaagaaga  
 2160  
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 2208

<210> 4180

<211> 257

<212> PRT

<213> Homo sapiens

<400> 4180

Met	Leu	Leu	Thr	Leu	Ala	Gly	Gly	Ala	Leu	Phe	Phe	Pro	Gly	Leu	Phe
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Ala	Leu	Cys	Thr	Trp	Ala	Leu	Arg	Arg	Ser	Gln	Pro	Gly	Trp	Ser	Arg
			20					25					30		
Thr	Asp	Cys	Val	Met	Ile	Ser	Thr	Arg	Leu	Val	Ser	Ser	Val	His	Ala
			35					40					45		
Val	Leu	Ala	Thr	Gly	Ser	Gly	Ile	Val	Ile	Ile	Arg	Ser	Cys	Asp	Asp
			50				55					60			
Val	Ile	Thr	Gly	Arg	His	Trp	Leu	Ala	Arg	Glu	Tyr	Val	Trp	Phe	Leu
65					70					75					80
Ile	Pro	Tyr	Met	Ile	Tyr	Asp	Ser	Tyr	Ala	Met	Tyr	Leu	Cys	Glu	Trp
			85						90					95	
Cys	Arg	Thr	Arg	Asp	Gln	Asn	Arg	Ala	Pro	Ser	Leu	Thr	Leu	Arg	Asn
			100					105					110		
Phe	Leu	Ser	Arg	Asn	Arg	Leu	Met	Ile	Thr	His	His	Ala	Val	Ile	Leu
			115					120					125		
Phe	Val	Leu	Val	Pro	Val	Ala	Gln	Arg	Leu	Arg	Gly	Asp	Leu	Gly	Asp
			130				135					140			
Phe	Phe	Val	Gly	Cys	Ile	Phe	Thr	Ala	Glu	Leu	Ser	Thr	Pro	Phe	Val
145					150					155					160
Ser	Leu	Gly	Arg	Val	Leu	Ile	Gln	Leu	Lys	Gln	Gln	His	Thr	Leu	Leu
			165					170						175	
Tyr	Lys	Val	Asn	Gly	Ile	Leu	Thr	Leu	Ala	Thr	Phe	Leu	Ser	Cys	Arg

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 4179

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aagatacact gatagttaaa aaaaaaagac aattaaaaaa tagcattttg ttttttaaat  
120  
ggcaccatt aaagactcaa cagtcaaat gagacaaatc agtcctttag acgttcacag  
180  
acaattgaaa ggcactttaa aaatccactt tttaaactac cacttgagaa cacatggtag  
240  
cacagtctta aattcatcct agttgatcgg gaatgatgaa tgagtgttg caccagaaaa  
300  
tcctgcttgc agaagggggc gcaggtgtcg gtccacggga cagccactgg ccaggctagc  
360  
tgccgectca ctccgcagcc ttctgtggct aaatggcagg acggacacac aggaatgggc  
420  
tttgaccac aagctctggc atatcgggag gcaaagcact caagtactct gcagtctaga  
480  
tgacacattt catggtttgg aggacagaag taggtttcca catcacatga aaaggacagt  
540  
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600  
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660  
aaaaagaaca gcctctgtga ctgactgcag taagctcaca agtttgtcac tgtcagactt  
720  
agcaagtcag cctgcaaagg ttgtgctgat ctcttgcca cactacctac tcaggttccc  
780  
atccatgcct cctgcctgcc cccaccccca gccccaccag tgagacttct gattggaagt  
840  
ctatagacat aagaattcaa ctctgacca tggatgagag gatgaggcaa agaaccaatg  
900  
ggttatctag taaacgatca ataactacct acccacaatg attgtcccag gccaatgtca  
960  
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1080  
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1140  
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1320  
caaagtctga ggctaccag ggcacaattt ggtccatgga atgctgagtg gaggaggcag  
1380  
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1440  
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1500

&lt;400&gt; 4178

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Met Met Leu Lys Gly Ile Thr Arg Leu Ile Ser Arg Ile His Lys Leu
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Asp Pro Gly Arg Phe Leu His Met Gly Thr Gln Ala Arg Gln Ser Ile
      20              25              30
Ala Ala His Leu Asp Asn Gln Val Pro Val Glu Ser Pro Arg Ala Ile
      35              40              45
Ser Arg Thr Asn Glu Asn Asp Pro Ala Lys His Gly Asp Gln His Glu
      50              55              60
Gly Gln His Tyr Asn Ile Ser Pro Gln Asp Leu Glu Thr Val Phe Pro
65              70              75              80
His Gly Leu Pro Pro Arg Phe Val Met Gln Val Lys Thr Phe Ser Glu
      85              90              95
Ala Cys Leu Met Val Arg Lys Pro Ala Leu Glu Leu Leu His Tyr Leu
      100             105             110
Lys Asn Thr Ser Phe Ala Tyr Pro Ala Ile Arg Tyr Leu Leu Tyr Gly
      115             120             125
Glu Lys Gly Thr Gly Lys Thr Leu Ser Leu Cys His Val Phe His Phe
      130             135             140
Cys Ala Lys Gln Asp Trp Leu Ile Leu His Ile Pro Asp Ala His Leu
145             150             155             160
Trp Val Lys Asn Cys Arg Asp Leu Leu Gln Ser Ser Tyr Asn Lys Gln
      165             170             175
Arg Phe Asp Gln Pro Leu Glu Ala Ser Thr Trp Leu Lys Asn Phe Lys
      180             185             190
Thr Thr Asn Glu Arg Phe Leu Asn Gln Ile Lys Val Gln Glu Lys Tyr
      195             200             205
Val Trp Asn Lys Arg Glu Leu Thr Glu Lys Gly Ser Pro Leu Gly Glu
      210             215             220
Val Val Glu Gln Gly Ile Thr Arg Val Arg Asn Ala Thr Asp Ala Val
225             230             235             240
Gly Ile Val Leu Lys Glu Leu Lys Arg Gln Ser Ser Leu Gly Met Phe
      245             250             255
His Leu Leu Val Ala Val Asp Gly Ile Asn Ala Leu Trp Gly Arg Thr
      260             265             270
Thr Leu Lys Arg Glu Asp Lys Ser Pro Ile Ala Pro Glu Glu Leu Ala
      275             280             285
Leu Val His Asn Leu Arg Lys Met Met Lys Asn Asp Trp His Gly Gly
      290             295             300
Ala Ile Val Ser Ala Leu Ser Gln Thr Gly Ser Leu Phe Lys Pro Arg
305             310             315             320
Lys Ala Tyr Leu Pro Gln Glu Leu Leu Gly Lys Glu Gly Phe Asp Ala
      325             330             335
Leu Asp Pro Phe Ile Pro Ile Leu Val Ser Asn Tyr Asn Pro Lys Glu
      340             345             350
Phe Glu Ser Cys Ile Gln Tyr Tyr Leu Glu Asn Asn Trp Leu Gln His
      355             360             365
Glu Lys Ala Pro Thr Glu Glu Gly Lys Lys Glu Leu Leu Phe Leu Ser
      370             375             380
Asn Ala Asn Pro Ser Leu Glu Arg His Cys Ala Tyr Leu
385             390             395

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&lt;210&gt; 4179

&lt;211&gt; 2208

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3660  
gaattagcac ttgttcacaa cttgaggaaa atgatgaaaa atgattggca tggaggcgcc  
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4260  
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4740  
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&lt;210&gt; 4178

&lt;211&gt; 398

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

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1860  
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1980  
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&lt;210&gt; 4177

&lt;211&gt; 4763

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 4177

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&lt;210&gt; 4176

&lt;211&gt; 586

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 4176

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Pro	Gln	Ala	Trp	Asp	Asp	Ser	Leu	Ile	Asp	Ser	Ser	Pro	Leu	Leu	His
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Tyr	Cys	Phe	His	Arg	Ser	Val	Asn	Arg	Glu	Thr	Lys	Val	Lys	Phe	Val
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Lys	Ala	Phe	Xaa	Pro	Cys	Ser	Ser	Xaa	Glu	Ala	Val	Pro	Glu	Gln	Lys

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 <212> PRT  
 <213> Homo sapiens

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 Gly Thr Pro Val Ser Lys Cys Ala Arg Ala Leu Gly Ser Ala Lys Gly  
 35 40 45  
 Pro Leu Leu Cys Cys Cys Val Gln Ala Trp His Leu Gln Asp Gly Asp  
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<210> 4172

<211> 184

<212> PRT

<213> Homo sapiens

<400> 4172

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Leu	Val	Ile	Ile	Gly	Thr	Leu	Leu	Ala	Trp	Tyr	Leu	Cys	Phe	Leu	Ile
		35				40						45			
Val	Phe	Ile	Leu	Pro	Leu	Asp	Val	Ser	Thr	Thr	Ile	Tyr	Asn	Arg	Cys
	50					55					60				
Lys	His	Ala	Ala	Gln	Ile	Gln	Ala	Leu	Leu	Arg	Ile	Ala	Thr	Leu	Gln
65				70						75				80	
Asp	Cys	Ala	Thr	Ala	Asn	Pro	Val	Pro	Ser	Gln	His	Pro	Cys	Phe	Lys
			85					90						95	
Pro	Trp	Ser	Tyr	Ile	Pro	Asp	Gly	Ile	Met	Pro	Ile	Phe	Trp	Arg	Val
		100					105						110		
Val	Tyr	Trp	Thr	Ser	Gln	Phe	Leu	Thr	Trp	Ile	Leu	Leu	Pro	Phe	Met
		115					120						125		
Gln	Ser	Tyr	Ala	Arg	Ser	Gly	Gly	Phe	Ser	Ile	Thr	Gly	Lys	Ile	Lys
	130					135					140				
Thr	Ala	Leu	Ile	Glu	Asn	Ala	Ile	Tyr	Tyr	Gly	Thr	Tyr	Leu	Leu	Ile
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<210> 4173

<211> 404

<212> DNA

<213> Homo sapiens

<400> 4173

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 755 760 765  
 Pro Ser Leu Lys Leu Ala Leu Gln Thr Gly Arg Glu Pro Pro Pro Ile  
 770 775 780  
 Trp Arg Val Gln Lys Ala Leu Leu Gln Lys Phe Thr Pro Glu Ile Lys  
 785 790 795 800  
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 805 810 815  
 Gly Asp Ala Lys Asn Arg Tyr Gln Arg Leu Tyr Val Lys Phe Leu Glu  
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 Asn Val Asn Lys Lys Asp Tyr Val Arg Val Cys Ala Arg Lys Pro Trp  
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 850 855 860  
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&lt;210&gt; 4171

&lt;211&gt; 889

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 4171

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<211> 900

<212> PRT

<213> Homo sapiens

<400> 4170

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Ala	His	Leu	Arg	Ser	His	Gly	Leu	Glu	Pro	Ala	Ala	Pro	Ser	Pro	Arg
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Leu	Arg	Pro	Glu	Glu	Ser	Leu	Asp	Pro	Pro	Gly	Ala	Met	Gln	Glu	Leu
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Leu	Gly	Ala	Leu	Glu	Pro	Leu	Pro	Pro	Ala	Pro	Gly	Asp	Thr	Gly	Val
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Gly	Pro	Pro	Asn	Ser	Glu	Gly	Lys	Asp	Pro	Ala	Gly	Ala	Tyr	Arg	Ser
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Pro	Ser	Pro	Gln	Gly	Thr	Lys	Ala	Pro	Arg	Phe	Val	Pro	Leu	Thr	Ser
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Ile	Cys	Phe	Pro	Asp	Ser	Leu	Leu	Gln	Asp	Glu	Glu	Arg	Ser	Phe	Phe
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Ser	Ser	Phe	His	Leu	Leu	Arg	Arg	Arg	Asp	Pro	Pro	Phe	Gln	Thr	Pro
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Lys	Lys	Leu	Tyr	Ala	Gln	Glu	Tyr	Glu	Phe	Glu	Ala	Asp	Glu	Asp	Lys
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Ala	Asp	Val	Pro	Ala	Asp	Ile	Arg	Leu	Asn	Pro	Arg	Arg	Leu	Pro	Asp

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&lt;210&gt; 4169

&lt;211&gt; 4743

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 4169

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&lt;210&gt; 4168

&lt;211&gt; 299

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 4168

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			20					25					30		
Gln	Thr	Ala	Gly	Val	Gln	Trp	Arg	Asp	Leu	Ser	Pro	Pro	Gln	Leu	Pro
		35					40					45			
Pro	Pro	Gly	Ile	Lys	Gln	Ser	Ser	Cys	Phe	Ser	Leu	Leu	Ser	Ser	Leu
		50				55					60				
Asp	Tyr	Arg	Tyr	Gly	Arg	Val	Glu	Ser	Val	Lys	Ile	Leu	Pro	Lys	Arg
65					70					75				80	
Gly	Ser	Glu	Gly	Gly	Val	Ala	Ala	Phe	Val	Asp	Phe	Val	Asp	Ile	Lys
			85					90					95		
Ser	Ala	Gln	Lys	Ala	His	Asn	Ser	Val	Asn	Lys	Met	Gly	Asp	Arg	Asp
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Leu	Arg	Thr	Asp	Tyr	Asn	Glu	Pro	Gly	Thr	Ile	Pro	Ser	Ala	Ala	Arg
		115					120						125		
Gly	Leu	Asp	Asp	Thr	Val	Ser	Ile	Ala	Ser	Arg	Ser	Arg	Glu	Val	Ser
		130					135					140			
Gly	Phe	Arg	Gly	Gly	Gly	Gly	Gly	Pro	Ala	Tyr	Gly	Pro	Pro	Pro	Ser
145						150				155				160	
Leu	His	Ala	Arg	Glu	Gly	Arg	Tyr	Glu	Arg	Arg	Leu	Asp	Gly	Ala	Ser
			165					170					175		
Asp	Asn	Arg	Glu	Arg	Ala	Tyr	Glu	His	Ser	Ala	Tyr	Gly	His	His	Glu
		180						185					190		
Arg	Gly	Thr	Gly	Gly	Phe	Asp	Arg	Thr	Arg	His	Tyr	Asp	Gln	Asp	Tyr
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Tyr	Arg	Asp	Pro	Arg	Glu	Arg	Thr	Leu	Gln	His	Gly	Leu	Tyr	Tyr	Ala
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Ser	Arg	Ser	Arg	Ser	Pro	Asn	Arg	Phe	Asp	Ala	His	Asp	Pro	Arg	Tyr
225						230				235				240	
Glu	Pro	Arg	Ala	Arg	Glu	Gln	Phe	Thr	Leu	Pro	Ser	Val	Val	His	Arg
			245					250					255		
Asp	Ile	Tyr	Arg	Asp	Asp	Ile	Thr	Arg	Glu	Val	Arg	Gly	Arg	Arg	Pro

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<210> 4166

<211> 166

<212> PRT

<213> Homo sapiens

<400> 4166

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		20					25					30			
Arg	Arg	Thr	Gly	Gln	Tyr	Lys	Gly	Leu	Leu	Asp	Cys	Ala	Arg	Arg	Ile
	35					40				45					
Leu	Glu	Arg	Glu	Gly	Pro	Arg	Ala	Phe	Tyr	Arg	Gly	Tyr	Leu	Pro	Asn
	50				55					60					
Val	Leu	Gly	Ile	Ile	Pro	Tyr	Ala	Gly	Ile	Asp	Leu	Ala	Val	Tyr	Glu
65				70				75						80	
Thr	Leu	Lys	Asn	Trp	Trp	Leu	Gln	Gln	Tyr	Ser	His	Asp	Ser	Ala	Asp
			85					90					95		
Pro	Gly	Ile	Leu	Val	Leu	Leu	Ala	Cys	Gly	Thr	Ile	Ser	Ser	Thr	Cys
		100					105					110			
Gly	Gln	Ile	Ala	Ser	Tyr	Pro	Leu	Ala	Leu	Val	Arg	Thr	Arg	Met	Gln
		115					120					125			
Ala	Gln	Gly	Phe	His	His	Val	Ala	Gln	Ala	His	Leu	Glu	Leu	Val	Gly
	130					135				140					
Ser	Arg	Asn	Ser	Pro	Ala	Phe	Ser	Leu	Pro	Thr	Cys	Trp	Asp	Tyr	Arg
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Lys	Pro	Val	Val	Met	Pro										
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<210> 4167

<211> 897

<212> DNA

<213> Homo sapiens

<400> 4167

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&lt;400&gt; 4164

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 Cys Gly Leu Gln Asp Pro Ala Gly Ser Arg Pro Leu Ser Pro Pro Phe  
 35 40 45  
 Ser Arg Leu Arg Ser Glu Gly Ser Lys Ser Val Leu Pro Gln Trp Leu  
 50 55 60  
 Trp Gly Met Lys Gly Ile Pro Val Pro Ser Gly His Pro Gln Ala Asp  
 65 70 75 80  
 Gly Arg Arg Ala Leu Val Arg Ala Val Gly His Pro Gln Asp Leu Leu  
 85 90 95  
 Thr Glu Ala Ser Pro Arg Cys Pro Ala Gly Pro Ser Pro Leu Arg Ser  
 100 105 110  
 Thr Gly Arg Lys Pro Pro Gly Pro Pro Arg Gly Gly Asp Leu Ala Ala  
 115 120 125  
 Pro Val Leu Phe Lys Ala Trp Ala Thr Ser Leu Ala Cys Pro Lys Trp  
 130 135 140  
 Gln Ala Leu Arg Arg Ala Arg Met Val Pro Val Val Gln Gly Ser Pro  
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&lt;210&gt; 4165

&lt;211&gt; 717

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 4165

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Asn Gln Ser Pro Leu Arg Gln Leu Asp Asn Gly Val Ser Gly Arg Glu
              755              760              765
Asp Asp Asp Asp Val Glu Met Leu Ile Pro Ile Ser Asp Gly Ser Ser
              770              775              780
Asp Phe Asp Val Asn Asp Cys Ser Arg Pro Leu Leu Asp Leu Ala Ser
785              790              795              800
Asp Gln Gly Gln Gly Leu Arg Gln Pro Tyr Asn Ala Thr Asn Pro Gly
              805              810              815
Val Arg Pro Ser Asn Arg Asp Gly Pro Cys Glu Arg Cys Gly Ile Val
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His Thr Ala Gln Ile Pro Asp Thr Cys Leu Glu Val Thr Leu Lys Asn
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&lt;210&gt; 4163

&lt;211&gt; 568

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 4163

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568

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&lt;210&gt; 4164

&lt;211&gt; 187

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens



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 290 295 300  
 Lys Leu Asp Gly Thr Gly Tyr Gly Asp Tyr Val Lys Ile Tyr Asp Gly  
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 Leu Glu Glu Asn Pro His Lys Leu Leu Arg Val Leu Thr Ala Phe Asp  
 325 330 335  
 Ser His Ala Pro Leu Thr Val Val Ser Ser Ser Gly Gln Ile Arg Val  
 340 345 350  
 His Phe Cys Ala Asp Lys Val Asn Ala Ala Arg Gly Phe Asn Ala Thr  
 355 360 365  
 Tyr Gln Val Asp Gly Phe Cys Leu Pro Trp Glu Ile Pro Cys Gly Gly  
 370 375 380  
 Asn Trp Gly Cys Tyr Thr Glu Gln Gln Arg Cys Asp Gly Tyr Trp His  
 385 390 395 400  
 Cys Pro Asn Gly Arg Asp Glu Thr Asn Cys Thr Met Cys Gln Lys Glu  
 405 410 415  
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 420 425 430  
 Cys Asn Tyr Gln Asn His Cys Pro Asn Gly Ser Asp Glu Lys Asn Cys  
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<211> 859

<212> PRT

<213> Homo sapiens

<400> 4162

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Glu	His	Ser	Glu	Asn	Val	His	Ile	Ser	Gly	Val	Ser	Thr	Ala	Cys	Gly
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<211> 360

<212> PRT

<213> Homo sapiens

<400> 4160

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Lys	Leu	Thr	Ser	Ala	Ser	Lys	Glu	Ser	Leu	Ser	Thr	His	Thr	Ser	Pro
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Ser	Gln	Ser	Pro	Asn	Ser	Val	His	Gly	Ser	Arg	Arg	Gly	Ser	Ile	Ser
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Glu	Gly	Trp	Leu	Pro	Leu	Ser	Gly	Gly	Gln	Gly	Gln	Ser	Glu	Asp	Ser
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&lt;210&gt; 4158

&lt;211&gt; 463

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 4158

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Thr Arg Arg Cys Met Leu Ile Leu Gly Ile Pro Glu Asp Cys Gly Glu



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1980  
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2160

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      1           5           10           15
Leu Ala Leu Glu Tyr Ile Arg Tyr Pro Glu Ser Gly Thr Leu Glu Met
      20           25           30
Asn Val Lys Asp Leu Arg Pro Arg Ala Arg Thr Ile Leu Lys Trp Asn
      35           40           45
Glu Leu Asn Val Gly Asp Val Val Met Val Asn Tyr Asn Val Glu Ser
      50           55           60
Pro Gly Gln Arg Gly Phe Trp Phe Asp Ala Glu Ile Thr Thr Leu Lys
      65           70           75           80
Thr Ile Ser Arg Thr Lys Lys Glu Leu Arg Val Lys Ile Phe Leu Gly
      85           90           95
Gly Ser Glu Gly Thr Leu Asn Asp Cys Lys Ile Ile Ser Val Asp Glu
      100          105          110
Ile Phe Lys Ile Glu Arg Pro Gly Ala His Pro Leu Ser Phe Ala Asp
      115          120          125
Gly Lys Phe Leu Arg Arg Asn Asp Pro Glu Cys Asp Leu Cys Gly Gly
      130          135          140
Asp Pro Glu Lys Lys Cys His Ser Cys Ser Cys Arg Val Cys Gly Gly
      145          150          155          160
Lys His Glu Pro Asn Met Gln Leu Leu Cys Asp Glu Cys Asn Val Ala
      165          170          175
Tyr His Ile Tyr Cys Leu Asn Pro Pro Leu Asp Lys Val Pro Glu Glu
      180          185          190
Glu Tyr Trp Tyr Cys Pro Ser Cys Lys Thr Asp Ser Ser Glu Val Val
      195          200          205
Lys Ala Gly Glu Arg Leu Lys Met Ser Lys Lys Lys Ala Lys Met Pro
      210          215          220
Ser Ala Ser Thr Glu Ser Arg Arg Asp
      225          230

```

&lt;210&gt; 4157

&lt;211&gt; 3460

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 4157

```

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60
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120
gaggatgagt ttgaggagac actccaggag gcttgacagg acctgggcag atacaggggtg
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240
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360
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420
gtccaagag tgactatatc accagagttc tggacctggg ccagactct gggggcagca
480
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540

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<210> 4155  
<211> 1191  
<212> DNA  
<213> Homo sapiens

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120  
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240  
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300  
taattcagct gctagttcgc ccagaccctg atcatcttcc tggcacatct acacagattg  
360  
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420  
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1191

<210> 4156  
<211> 233  
<212> PRT  
<213> Homo sapiens

<400> 4156  
Asp Leu Pro Ile Ser His Leu His Gln Leu Val Pro Val Leu Leu Ile

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Arg Glu Gly Glu Thr Pro Ala Glu Asp Ala Lys Leu Asp Arg Pro Gly
      35      40      45
Ser Glu Pro Ala Ser Val Ala Pro Asn Gln Asn Leu Leu Cys Ala Pro
      50      55      60
Arg Pro Pro Ser Thr Phe Met Ser Val Leu Leu Leu Arg Gly Gln Val
65      70      75      80
Leu Pro Ser Leu Thr Ala Leu Ala Arg Pro Ala Arg Phe Pro Ser Asn
      85      90      95
Pro

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<210> 4153  
 <211> 395  
 <212> DNA  
 <213> Homo sapiens

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<400> 4153
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120
tcattaattc ttccacttta tcatttacat ctaggtctctc ttctgaggct tcaaaactgt
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atgacctctg acccatgctg tttgcatgga agcgagttgg tgacatcttt ccattggatg
240
tagataatcg ctcattattc tccctcccat tttgattggt agtgcaaggc tgtggggaag
300
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395

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<210> 4154  
 <211> 110  
 <212> PRT  
 <213> Homo sapiens

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<400> 4154
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Thr Thr Asn Gln Asn Gly Arg Glu Asn Asn Glu Arg Leu Ser Thr Ser
      20      25      30
Asn Gly Lys Met Ser Pro Thr Arg Phe His Ala Asn Ser Met Gly Gln
      35      40      45
Arg Ser Tyr Ser Phe Glu Ala Ser Glu Glu Asp Leu Asp Val Asn Asp
50      55      60
Lys Val Glu Glu Leu Met Arg Arg Asp Ser Ser Val Ile Lys Glu Glu
65      70      75      80
Ile Lys Ala Phe Leu Ala Asn Arg Arg Ile Ser Gln Ala Val Asp Thr
      85      90      95
Ile Gly Lys Met Leu Phe Pro Ser Val His Ser Gly Leu Ile
      100      105      110

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 720  
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&lt;210&gt; 4152

&lt;211&gt; 97

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 4152

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1					5				10					15	
Gly	Cys	Pro	Ala	Val	Arg	Lys	Ala	Ser	Ala	Gly	Ala	Ala	Ala	Ala	Val

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 1380  
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 1396

<210> 4150

<211> 193

<212> PRT

<213> Homo sapiens

<400> 4150

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		20					25					30			
His	Ile	Lys	Arg	Ile	Thr	Asp	Asn	Asp	Ile	Gln	Ser	Leu	Val	Leu	Glu
	35					40				45					
Ile	Glu	Gly	Thr	Asn	Val	Ser	Thr	Thr	Tyr	Ile	Thr	Cys	Pro	Ala	Asp
	50			55					60						
Pro	Lys	Lys	Thr	Leu	Gly	Ile	Lys	Leu	Pro	Phe	Leu	Val	Met	Ile	Ile
65				70				75					80		
Lys	Asn	Leu	Lys	Lys	Tyr	Phe	Thr	Phe	Glu	Val	Gln	Val	Leu	Asp	Asp
		85				90							95		
Lys	Asn	Val	Arg	Arg	Phe	Arg	Ala	Ser	Asn	Tyr	Gln	Ser	Thr	Thr	
	100					105						110			
Arg	Val	Lys	Pro	Phe	Ile	Cys	Thr	Met	Pro	Met	Arg	Leu	Asp	Asp	Gly
	115					120						125			
Trp	Asn	Gln	Ile	Gln	Phe	Asn	Leu	Leu	Asp	Phe	Thr	Arg	Arg	Ala	Tyr
	130				135						140				
Gly	Thr	Asn	Tyr	Ile	Glu	Thr	Leu	Arg	Val	Gln	Ile	His	Ala	Asn	Cys
145				150				155					160		
Arg	Ile	Arg	Arg	Val	Tyr	Phe	Ser	Asp	Arg	Leu	Tyr	Ser	Glu	Asp	Glu
		165				170							175		
Leu	Pro	Ala	Glu	Phe	Lys	Leu	Tyr	Leu	Pro	Val	Gln	Asn	Lys	Ala	Lys
	180					185						190			

Gln

<210> 4151

<211> 1372

<212> DNA

<213> Homo sapiens

<400> 4151

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Leu Leu Glu His Leu Gln Glu Met Arg Glu Glu Lys Lys Arg Ile Arg		
625	630	635
Lys Lys Leu Arg Asp Phe Glu Asp Asn Phe Phe Arg Gln Asn Gly Arg		640
	645	650
Asn Val Gln Lys Glu Asp Arg Thr Pro Met Ala Glu Glu Tyr Ser Glu		655
	660	665
Tyr Lys His Ile Lys Ala Lys Leu Arg Leu Leu Glu Val Leu Ile Ser		670
	675	680
Lys Arg Asp Thr Asp Ser Lys Ser Met		685
690	695	

&lt;210&gt; 4149

&lt;211&gt; 1396

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 4149

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 1020  
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 1080

180 185 190  
 Gly Gly His Thr Gln His Phe Glu Ser Pro Thr Met Lys Ile Gln Glu  
 195 200 205  
 His Pro Ser Leu Ser Asp Thr Lys Gln Gln Arg Asn Gln Asp Ala Gly  
 210 215 220  
 Asp Gln Glu Glu Ser Phe Val Ser Glu Val Pro Gln Ser Asp Leu Thr  
 225 230 235 240  
 Ala Leu Cys Asp Glu Lys Asn Trp Glu Glu Pro Ile Pro Ala Phe Ser  
 245 250 255  
 Ser Trp Gln Arg Glu Asn Ser Asp Ser Asp Glu Ala His Leu Ser Pro  
 260 265 270  
 Gln Ala Gly Arg Leu Ile Arg Gln Leu Leu Asp Glu Asp Ser Asp Pro  
 275 280 285  
 Met Leu Ser Pro Arg Phe Tyr Ala Tyr Gly Gln Ser Arg Gln Tyr Leu  
 290 295 300  
 Asp Asp Thr Glu Val Pro Pro Ser Pro Pro Asn Ser His Ser Phe Met  
 305 310 315 320  
 Arg Arg Arg Ser Ser Ser Leu Gly Ser Tyr Asp Asp Glu Gln Glu Asp  
 325 330 335  
 Leu Thr Pro Ala Gln Leu Thr Arg Arg Ile Gln Ser Leu Lys Lys Lys  
 340 345 350  
 Ile Arg Lys Phe Glu Asp Arg Phe Glu Glu Glu Lys Lys Tyr Arg Pro  
 355 360 365  
 Ser His Ser Asp Lys Ala Ala Asn Pro Glu Val Leu Lys Trp Thr Asn  
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 Asp Leu Ala Lys Phe Arg Arg Gln Leu Lys Glu Ser Lys Leu Lys Ile  
 385 390 395 400  
 Ser Glu Glu Asp Leu Thr Pro Arg Met Arg Gln Arg Ser Asn Thr Leu  
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 Pro Lys Ser Phe Gly Ser Gln Leu Glu Lys Glu Asp Glu Lys Lys Gln  
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 435 440 445  
 Ser Ile Gln Arg Lys Leu Gln Glu Lys Arg Ala Glu Ser Ser Arg Pro  
 450 455 460  
 Glu Asp Ile Lys Asp Met Thr Lys Asp Gln Ile Ala Asn Glu Lys Val  
 465 470 475 480  
 Ala Leu Gln Lys Ala Leu Leu Tyr Tyr Glu Ser Ile His Gly Arg Pro  
 485 490 495  
 Val Thr Lys Asn Glu Arg Gln Val Met Lys Pro Leu Tyr Asp Arg Tyr  
 500 505 510  
 Arg Leu Val Lys Gln Ile Leu Ser Arg Ala Asn Thr Ile Pro Ile Ile  
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 Gly Ser Pro Ser Ser Lys Arg Arg Ser Pro Leu Leu Gln Pro Ile Ile  
 530 535 540  
 Glu Gly Glu Thr Ala Ser Phe Phe Lys Glu Ile Lys Glu Glu Glu Glu  
 545 550 555 560  
 Gly Ser Glu Asp Asp Ser Asn Val Lys Pro Asp Phe Met Val Thr Leu  
 565 570 575  
 Lys Thr Asp Phe Ser Ala Arg Cys Phe Leu Asp Gln Phe Glu Asp Asp  
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 Ala Asp Gly Phe Ile Ser Pro Met Asp Asp Lys Ile Pro Ser Lys Cys  
 595 600 605  
 Ser Gln Asp Thr Gly Leu Ser Asn Leu His Ala Ala Ser Ile Pro Glu



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&lt;210&gt; 4148

&lt;211&gt; 697

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 4148

Met Ala Cys Glu Ile Met Pro Leu Gln Ser Ser Gln Glu Asp Glu Arg  
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 Val Ser Ala Thr Gly Glu Leu Leu Glu Arg Thr Ile Arg Ser Ala Val  
 35 40 45  
 Glu Gln His Leu Phe Asp Val Asn Asn Ser Gly Gly Gln Ser Ser Glu  
 50 55 60  
 Asp Ser Glu Ser Gly Thr Leu Ser Ala Ser Ser Ala Thr Ser Ala Arg  
 65 70 75 80  
 Gln Arg Arg Arg Gln Ser Lys Glu Gln Asp Glu Val Arg His Gly Arg  
 85 90 95  
 Asp Lys Gly Leu Ile Asn Lys Glu Asn Thr Pro Ser Gly Phe Asn His  
 100 105 110  
 Leu Asp Asp Cys Ile Leu Asn Thr Gln Glu Val Glu Lys Val His Lys  
 115 120 125  
 Asn Thr Phe Gly Cys Ala Gly Glu Arg Ser Lys Pro Lys Arg Gln Lys  
 130 135 140  
 Ser Ser Thr Lys Leu Ser Glu Leu His Asp Asn Gln Asp Gly Leu Val  
 145 150 155 160  
 Asn Met Glu Ser Leu Asn Ser Thr Arg Ser His Glu Arg Thr Gly Pro  
 165 170 175  
 Asp Asp Phe Glu Trp Met Ser Asp Glu Arg Lys Gly Asn Glu Lys Asp

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&lt;210&gt; 4147

&lt;211&gt; 4892

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 4147

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Gly Pro Leu Arg Gln Gly Leu Val Ala Ile Lys Glu Ala His Asp Ile
      85              90              95
Glu Thr Arg Leu Asn Glu Val Glu Lys Leu Leu Lys Thr Ile Ile Ser
      100      105      110
Met Pro Cys Lys Tyr Ser Arg Ser Glu Val Val Leu Thr Phe Phe Glu
      115      120      125
Arg Ser Pro Leu Asp Gln Val Leu Lys Asn Asp Asn Val His Lys Ile
      130      135      140
Gln Pro Ser Phe Gln Ser Pro Val Lys Ile Ser Glu Ile Met Arg Ser
145      150      155      160
Asn Gly Phe Cys Leu Ala Asn Thr Glu Thr Ile Val Ile Asp His Ser
      165      170      175
Ile Pro Asn Gly Arg Asp Gln Gln Leu Gly Val Asp Pro Thr Glu His
      180      185      190
Leu Phe Glu Asn Gly Ser Glu Phe Pro Ser Glu Leu Glu Asp Gly Asp
      195      200      205
Asp Pro Ala Ala Tyr Val Thr Asn Leu Ser Tyr Tyr His Leu Val Pro
      210      215      220
Phe Glu Thr Asp Ile Trp Asp
225      230

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&lt;210&gt; 4145

&lt;211&gt; 400

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 4145

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&lt;210&gt; 4146

&lt;211&gt; 133

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 4146

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Glu Pro Asp Lys Thr Pro Ala Ala Thr Val Thr Asn Glu Ala Ser Cys

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<211> 231

<212> PRT

<213> Homo sapiens

<400> 4144

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		20						25				30			
Gly	Asp	Glu	Glu	Glu	Phe	Phe	Glu	Ile	Arg	Thr	Glu	Trp	Ser	Asp	Arg
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<212> DNA
<213> Homo sapiens
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&lt;211&gt; 311

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 4142

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			20				25					30			
Ser	Arg	Val	His	Ile	Tyr	His	His	Thr	Gly	Asn	Asn	Thr	Phe	Arg	Val
		35				40					45				
Val	Gly	Arg	Lys	Ile	Gln	Asp	His	Gln	Val	Val	Ile	Asn	Cys	Ala	Ile
	50				55			60							
Pro	Lys	Gly	Leu	Lys	Tyr	Asn	Gln	Ala	Thr	Gln	Thr	Phe	His	Gln	Trp
65				70			75							80	
Arg	Asp	Ala	Arg	Gln	Val	Tyr	Gly	Leu	Asn	Phe	Gly	Ser	Lys	Glu	Asp
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Ala	Asn	Val	Phe	Ala	Ser	Ala	Met	Met	His	Ala	Leu	Glu	Val	Leu	Asn



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 Val Cys Arg Ile Trp Lys Ser Gly Ala Lys Leu Arg Val Asp Ile Thr  
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 Glu Arg Leu Thr Leu Asp Leu Met Lys Pro Lys Ser Arg Glu Val Glu  
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 260 265 270  
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 Gly Thr Val Glu His Gln Phe Gly Ala Gln Gly Asp Leu Thr Thr Glu  
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 Asp Trp Met Gln Ile Ile Arg Lys Arg Ala Val Val Tyr Val Gly Leu  
 65 70 75 80  
 Asp Ala Leu Ser Asp Thr Glu Val Ala Ala Ala Val Gly Asn Ser Met  
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 <213> Homo sapiens

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20 25 30  
 Gly Ala Glu Asp Arg Ala Val Gly Ala Gln Ala Ser Val Gly Ser Arg  
 35 40 45  
 Ser Glu Gly Glu Gly Glu Ala Ala Ser Ala Asp Asp Gly Ser Leu Asn  
 50 55 60  
 Thr Ser Gly Ala Gly Pro Lys Ser Trp Gln Val Pro Pro Pro Ala Pro  
 65 70 75 80  
 Glu Val Gln Ile Arg Thr Pro Arg Val Asn Cys Pro Glu Lys Val Ile  
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 Ile Cys Leu Asp Leu Ser Glu Glu Met Ser Leu Pro Lys Leu Glu Ser  
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 Phe Asn Gly Ser Lys Thr Asn Ala Leu Asn Val Ser Gln Lys Met Ile  
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 Glu Met Phe Val Arg Thr Lys His Lys Ile Asp Lys Ser His Glu Phe  
 130 135 140  
 Ala Leu Val Val Val Asn Asp Asp Thr Ala Trp Leu Ser Gly Leu Thr  
 145 150 155 160  
 Ser Asp Pro Arg Glu Leu Cys Ser Cys Leu Tyr Asp Leu Glu Thr Ala  
 165 170 175  
 Ser Cys Ser Thr Phe Asn Leu Glu Gly Leu Phe Ser Leu Ile Gln Gln  
 180 185 190  
 Lys Thr Glu Leu Pro Val Thr Glu Asn Val Gln Thr Ile Pro Pro Pro  
 195 200 205  
 Tyr Val Val Arg Thr Ile Leu Val Tyr Ser Arg Pro Pro Cys Gln Pro  
 210 215 220  
 Gln Phe Ser Leu Thr Glu Pro Met Lys Lys Met Phe Gln Cys Pro Tyr  
 225 230 235 240  
 Phe Phe Phe Asp Val Val Tyr Ile His Asn Gly Thr Glu Glu Lys Glu  
 245 250 255  
 Glu Glu Met Ser Trp Lys Asp Met Phe Ala Phe Met Gly Ser Leu Asp  
 260 265 270  
 Thr Lys Gly Thr Ser Tyr Lys Tyr Glu Val Ala Leu Ala Gly Pro Ala  
 275 280 285  
 Leu Glu Leu His Asn Cys Met Ala Lys Leu Leu Ala His Pro Leu Gln  
 290 295 300  
 Arg Pro Cys Gln Ser His Ala Ser Tyr Ser Leu Leu Glu Glu Glu Asp  
 305 310 315 320  
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&lt;210&gt; 4135

&lt;211&gt; 388

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 4135

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tctgccattg ctggaaaaac tgaccacagg ccggattgca gagctgctat ctcccgacta  
180

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240

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 1646

&lt;210&gt; 4134

&lt;211&gt; 329

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 4134

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<211> 194  
<212> PRT  
<213> Homo sapiens

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35 40 45  
Glu Leu Asp Ser Asp Ser Glu Asp Leu Asp Pro Asn Pro Glu Asp Leu  
50 55 60  
Asp Pro Val Ser Glu Asp Pro Glu Pro Asp Pro Glu Asp Leu Asn Thr  
65 70 75 80  
Val Pro Glu Asp Val Asp Pro Ser Tyr Glu Asp Leu Glu Pro Val Ser  
85 90 95  
Glu Asp Leu Asp Pro Asp Ala Glu Ala Pro Gly Ser Glu Pro Gln Asp  
100 105 110  
Pro Asp Pro Met Ser Ser Ser Phe Asp Leu Asp Pro Asp Val Ile Gly  
115 120 125  
Pro Val Pro Leu Ile Leu Asp Pro Asn Ser Asp Thr Leu Ser Pro Gly  
130 135 140  
Asp Pro Lys Val Asp Pro Xaa Ser Pro Leu Ala Ser Leu Arg Ala Pro  
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Pro Gly Pro Ser Pro Ala Arg Ile Ala Ala Lys Pro Ser Ala Ala Ala  
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<210> 4133  
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<212> DNA  
<213> Homo sapiens

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360

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Cys Tyr His Lys Lys Phe Arg Ser Pro Ala Arg Asp Val Ile Phe Arg
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Val Gln Phe His Thr Cys Ala Ile His Ala Trp Gly Val Val Phe Gly
          340          345          350
Lys Glu Asp Leu Asp Asp Ala Phe Lys Asp Asp Arg Phe Pro Glu Tyr
          355          360          365
Gly Lys Val Glu Phe Val Phe Ser Tyr Gly Pro Glu Lys Ile Gln Gly
          370          375          380
Met Glu His Leu Glu Asn Gly Pro Ser Val Ser Val Asp Tyr Asn Thr
385          390          395          400
Ser Asp Pro Leu Ile Arg Trp Asp Ser Tyr Asp Asn Phe Ser Gly His
          405          410          415
Arg Asp Asp Gly Met Glu Glu Val Val Gly His Thr Gln Gly Pro Leu
          420          425          430
Asp Gly Ser Leu Tyr Ala Lys Val Lys Lys Lys Asp Ser Leu His Gly
          435          440          445
Ser Thr Gly Ala Val Asn Ala Thr Arg Pro Thr Leu Ser Ala Thr Pro
          450          455          460
Asn His Val Glu His Thr Leu Ser Val Ser Ser Asp Ser Gly Asn Ser
465          470          475          480
Thr Ala Ser Thr Lys Thr Asp Lys Thr Asp Glu Pro Val Pro Gly Ala
          485          490          495
Ser Ser Ala His Ala Ala Arg Thr Val Thr Ile Leu Val Trp Gln Phe
          500          505          510
Ile Val Gln Asp Val Cys Leu Pro Leu Arg Cys
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&lt;210&gt; 4131

&lt;211&gt; 608

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 4131

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120
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600

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 1749

<210> 4130

<211> 523

<212> PRT

<213> Homo sapiens

<400> 4130

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			20					25					30		
Val	Val	Asp	Gln	Gly	Ala	Gly	Ala	Ser	Arg	Gly	Gly	Asn	Thr	Arg	Lys
		35				40					45				
Ser	Leu	Glu	Asp	Asn	Gly	Ser	Thr	Arg	Val	Thr	Pro	Ser	Val	Gln	Pro
	50				55					60					
His	Leu	Gln	Pro	Ile	Arg	Asn	Met	Ser	Val	Ser	Arg	Thr	Met	Glu	Asp
65				70						75				80	
Ser	Cys	Glu	Leu	Asp	Leu	Val	Tyr	Val	Thr	Glu	Arg	Ile	Ile	Ala	Val
			85					90					95		
Ser	Phe	Pro	Ser	Thr	Ala	Asn	Glu	Glu	Asn	Phe	Arg	Ser	Asn	Leu	Arg
		100					105					110			
Glu	Val	Ala	Gln	Met	Leu	Lys	Ser	Lys	His	Gly	Gly	Asn	Tyr	Leu	Leu
	115					120					125				
Phe	Asn	Leu	Ser	Glu	Arg	Arg	Pro	Asp	Ile	Thr	Lys	Leu	His	Ala	Lys
130					135						140				
Val	Leu	Glu	Phe	Gly	Trp	Pro	Asp	Leu	His	Thr	Pro	Ala	Leu	Glu	Lys
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Ile	Cys	Ser	Ile	Cys	Lys	Ala	Met	Asp	Thr	Trp	Leu	Asn	Ala	Asp	Pro
			165					170					175		
His	Asn	Val	Val	Val	Leu	His	Asn	Lys	Gly	Asn	Arg	Gly	Arg	Ile	Gly
		180					185					190			
Val	Val	Ile	Ala	Ala	Tyr	Met	His	Tyr	Ser	Asn	Ile	Ser	Ala	Ser	Ala
	195					200					205				
Asp	Gln	Ala	Leu	Asp	Arg	Phe	Ala	Met	Lys	Arg	Phe	Tyr	Glu	Asp	Lys
210					215						220				
Ile	Val	Pro	Ile	Gly	Gln	Pro	Ser	Gln	Arg	Arg	Tyr	Val	His	Tyr	Phe
225				230					235					240	
Ser	Gly	Leu	Leu	Ser	Gly	Ser	Ile	Lys	Met	Asn	Asn	Lys	Pro	Leu	Phe
			245					250					255		
Leu	His	His	Val	Ile	Met	His	Gly	Ile	Pro	Asn	Phe	Glu	Ser	Lys	Gly
		260					265					270			
Gly	Cys	Arg	Pro	Phe	Leu	Arg	Ile	Tyr	Gln	Ala	Met	Gln	Pro	Val	Tyr
	275					280					285				
Thr	Ser	Gly	Ile	Tyr	Asn	Ile	Pro	Gly	Asp	Ser	Gln	Thr	Ser	Val	Cys
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&lt;400&gt; 4129

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1560

50                      55                      60  
 Glu Phe Leu Val Ile Asp Val Ile His Glu Val Ala His Ser Trp Phe  
 65                      70                      75                      80  
 Gly Asn Ala Val Thr Asn Ala Thr Trp Glu Glu Met Trp Leu Ser Glu  
                     85                      90                      95  
 Gly Leu Ala Thr Tyr Ala Gln Arg Arg Ile Thr Thr Glu Thr Tyr Gly  
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 Ala Ala Phe Thr Cys Leu Glu Thr Ala Phe Arg Leu Asp Ala Leu His  
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 Arg Gln Met Lys Leu Leu Gly Glu Asp Ser Pro Val Ser Lys Leu Gln  
                     130                      135                      140  
 Val Lys Leu Glu Pro Gly Val Asn Pro Ser His Leu Met Asn Leu Phe  
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 Thr Tyr Glu Lys Gly Tyr Cys Phe Val Tyr Tyr Leu Ser Gln Leu Cys  
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 Gly Asp Pro Gln Arg Phe Asp Asp Phe Leu Arg Ala Tyr Val Glu Lys  
                     180                      185                      190  
 Tyr Lys Phe Thr Ser Val Val Ala Gln Asp Leu Leu Asp Ser Phe Leu  
                     195                      200                      205  
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                     210                      215                      220  
 Leu Glu Phe Glu Arg Trp Leu Asn Ala Thr Gly Pro Pro Leu Ala Glu  
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 Pro Asp Leu Ser Gln Gly Ser Ser Leu Thr Arg Pro Val Glu Ala Leu  
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 Phe Gln Leu Trp Thr Ala Glu Pro Leu Asp Gln Ala Ala Ala Ser Ala  
                     260                      265                      270  
 Ser Ala Ile Asp Ile Ser Lys Trp Arg Thr Phe Gln Thr Ala Leu Phe  
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 Leu Asp Arg Leu Leu Asp Gly Ser Pro Leu Pro Gln Glu Val Val Met  
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 Ser Leu Ser Lys Cys Tyr Ser Ser Leu Leu Asp Ser Met Asn Ala Glu  
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 Ile Arg Ile Arg Trp Leu Gln Ile Val Val Arg Asn Asp Tyr Tyr Pro  
                     325                      330                      335  
 Asp Leu His Arg Val Arg Arg Phe Leu Glu Ser Gln Met Ser Arg Met  
                     340                      345                      350  
 Tyr Thr Ile Pro Leu Tyr Glu Asp Leu Cys Thr Gly Ala Leu Lys Ser  
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 Phe Ala Leu Glu Val Phe Tyr Gln Thr Gln Gly Arg Leu His Pro Asn  
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 Leu Arg Arg Ala Ile Gln Gln Ile Leu Ser Gln Gly Leu Gly Ser Ser  
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 Thr Glu Pro Ala Ser Glu Pro Ser Thr Glu Leu Gly Lys Ala Glu Ala  
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 Asp Thr Asp Ser Asp Ala Gln Ala Leu Leu Leu Gly Asp Glu Ala Pro  
                     420                      425                      430  
 Ser Ser Ala Ile Ser Leu Arg Asp Val Asn Val Ser Ala  
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&lt;210&gt; 4129

&lt;211&gt; 1749

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

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&lt;210&gt; 4128

&lt;211&gt; 445

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 4128

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 Arg Tyr Asp Ile Val Phe Leu Pro Pro Ser Phe Pro Ile Val Ala Met  
 35 40 45  
 Glu Asn Pro Cys Leu Thr Phe Ile Ile Ser Ser Ile Leu Glu Ser Asp

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&lt;211&gt; 155

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 4124

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&lt;211&gt; 1095

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&lt;213&gt; Homo sapiens

&lt;400&gt; 4123

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&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 4122

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<211> 100

<212> PRT

<213> Homo sapiens

<400> 4120

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			20					25					30		
Cys	Ile	Leu	Val	Ser	Ile	Val	Thr	Glu	Phe	Val	Ser	Asn	Pro	Ala	Thr
	35					40						45			
Ile	Thr	Ile	Phe	Leu	Pro	Ile	Leu	Cys	Ser	Leu	Val	Ser	Asn	Ala	Glu
	50					55					60				
Leu	Pro	Asp	Ile	Gln	Thr	Gly	Cys	Pro	Arg	Gly	Leu	Glu	Trp	Gln	Ala
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Trp	Leu	Arg	Ala	Ala	Ser	Val	Ala	Val	Gly	Ser	Pro	Leu	Val	Thr	Ala
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<211> 2490

<212> DNA

<213> Homo sapiens

<400> 4121

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&lt;210&gt; 4118

&lt;211&gt; 128

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 4118

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&lt;210&gt; 4119

&lt;211&gt; 649

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens



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<211> 151

<212> PRT

<213> Homo sapiens

<400> 4116

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			20					25					30		
Asn	His	Ser	Asp	Ser	Leu	Ser	Arg	Ser	Asp	Arg	Ile	Asp	Ala	Val	Thr
		35				40						45			
Pro	Thr	Leu	Gly	Ser	Ser	Asn	Asn	Gln	Leu	Asn	Ser	Ser	Leu	Leu	Gln
	50					55				60					
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65				70					75				80		
Val	Lys	Ile	Ser	Arg	Gln	Gln	Tyr	Gln	Asn	Ala	Leu	Met	Ala	Ser	Arg
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		100						105				110			
Leu	Thr	Leu	Thr	Glu	Leu	His	Asp	Gly	Leu	Pro	Asp	Glu	Thr	Ala	Asn
	115					120					125				
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<211> 973

<212> DNA

<213> Homo sapiens

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	325	330
Ala Ser Ala Pro Ala Glu Pro Gly Trp Lys Ala Val Leu Thr Ile Leu		335
	340	345
Leu Ala His Lys Gln Ser Ser Gln Pro Ala Glu Thr Asp Ser Met Ser		350
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&lt;210&gt; 4115

&lt;211&gt; 1056

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 4115

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<211> 389

<212> PRT

<213> Homo sapiens

<400> 4114

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			20					25					30		
Lys	Ala	Leu	Cys	Thr	Ala	His	Glu	Lys	Phe	Cys	Phe	Trp	Pro	Asp	Ser
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Thr	Glu	Asp	Lys	Ile	Ser	Leu	Leu	Leu	His	Leu	Leu	Glu	Asp	Glu	Leu
			100					105					110		
Asp	His	Arg	Thr	Asp	Glu	Arg	Lys	Thr	Thr	Ile	Lys	Leu	Gly	Ser	Asp
		115					120					125			
Ile	Gln	Val	His	Val	Thr	Ala	Cys	Ile	Leu	Ser	Val	Cys	Gly	Trp	Ala
	130					135					140				
Cys	Ser	Ser	Ser	Leu	Glu	Ser	Met	Gln	Leu	Ser	Leu	Ile	Ala	Cys	Ser
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 <213> Homo sapiens

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<212> PRT

<213> Homo sapiens

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			20					25					30		
Leu	Arg	Glu	Ala	Ala	Thr	Gln	Ala	Gln	Gln	Thr	Leu	Gly	Ser	Thr	Ile
			35				40					45			
Asp	Lys	Ala	Thr	Gly	Ile	Leu	Leu	Tyr	Gly	Leu	Ala	Ser	Arg	Leu	Arg
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Asp	Thr	Arg	Arg	Leu	Ser	Phe	Leu	Val	Ser	Tyr	Ile	Ala	Ser	Lys	Lys
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Ile	His	Thr	Glu	Pro	Gln	Leu	Ser	Ala	Ala	Leu	Glu	Tyr	Val	Arg	Ser
				85					90					95	
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 Pro Leu Arg Ala Gly Glu Glu Gly Ser His Ser Arg Lys Ser Leu Cys  
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&lt;210&gt; 4111

&lt;211&gt; 2599

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 4111

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<211> 375

<212> PRT

<213> Homo sapiens

<400> 4110

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Pro	Ile	Phe	Ser	Leu	Ala	Thr	Pro	Leu	Arg	Ala	Gly	Glu	Glu	Gly	Ser
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His	Ser	Arg	Lys	Ser	Leu	Cys	Arg	Ser	Arg	Glu	Glu	Leu	Arg	Gly	Lys
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Val	Arg	Glu	Leu	Ala	Ser	Ala	Val	Arg	Asn	Ala	Lys	Tyr	Leu	Val	Val
65				70					75					80	
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Gly	Pro	Asn	Gly	Val	Trp	Thr	Leu	Leu	Gln	Lys	Gly	Arg	Ser	Val	Ser
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Ala	Ala	Asp	Leu	Ser	Glu	Ala	Glu	Pro	Thr	Leu	Thr	His	Met	Ser	Ile
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Thr	Arg	Leu	His	Glu	Gln	Lys	Leu	Val	Gln	His	Val	Val	Ser	Gln	Asn
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Cys	Asp	Gly	Leu	His	Leu	Arg	Ser	Gly	Leu	Pro	Arg	Thr	Ala	Ile	Ser
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			165					170						175	
Asn	Arg	Glu	Tyr	Val	Arg	Val	Phe	Asp	Val	Thr	Glu	Arg	Thr	Ala	Leu
		180					185						190		
His	Arg	His	Gln	Thr	Gly	Arg	Thr	Cys	His	Lys	Cys	Gly	Thr	Gln	Leu
		195					200					205			
Arg	Asp	Thr	Ile	Val	His	Phe	Gly	Glu	Arg	Gly	Thr	Leu	Gly	Gln	Pro
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Leu	Asn	Trp	Glu	Ala	Ala	Thr	Glu	Ala	Ala	Ser	Arg	Ala	Asp	Thr	Ile

210	215	220
Gln Pro Arg Cys Ser Glu Glu Asp Leu Lys Ala Ile Gln Asp Met Phe		
225	230	235
Pro Asn Met Asp Gln Glu Val Ile Arg Ser Val Leu Glu Ala Gln Arg		240
	245	250
Gly Asn Lys Asp Ala Ala Ile Asn Ser Leu Leu Gln Met Gly Glu Glu		255
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Pro		270

&lt;210&gt; 4109

&lt;211&gt; 1637

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 4109

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&lt;210&gt; 4108

&lt;211&gt; 273

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 4108

Met	Ala	Thr	Thr	Val	Ser	Thr	Gln	Arg	Gly	Pro	Val	Tyr	Ile	Gly	Glu
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Leu	Pro	Gln	Asp	Phe	Leu	Arg	Ile	Thr	Pro	Thr	Gln	Gln	Gln	Arg	Gln
		20					25						30		
Val	Gln	Leu	Asp	Ala	Gln	Ala	Pro	Ser	Ser	Cys	Ser	Thr	Glu	Ala	Gln
	35					40					45				
Gly	Thr	Val	Gly	Arg	Leu	Asn	Ile	Thr	Val	Val	Gln	Ala	Lys	Leu	Ala
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Lys	Asn	Tyr	Gly	Met	Thr	Arg	Met	Asp	Pro	Tyr	Cys	Arg	Leu	Arg	Leu
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Gly	Tyr	Ala	Val	Tyr	Glu	Thr	Pro	Thr	Ala	His	Asn	Gly	Ala	Lys	Asn
			85					90					95		
Pro	Arg	Trp	Asn	Lys	Val	Ile	His	Cys	Thr	Val	Pro	Pro	Gly	Val	Asp
		100					105						110		
Ser	Phe	Tyr	Leu	Glu	Ile	Phe	Asp	Glu	Arg	Ala	Phe	Ser	Met	Asp	Asp
	115						120					125			
Arg	Ile	Ala	Trp	Thr	His	Ile	Thr	Ile	Pro	Glu	Ser	Leu	Arg	Gln	Gly
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Lys	Val	Glu	Asp	Lys	Trp	Tyr	Ser	Leu	Ser	Gly	Arg	Gln	Gly	Asp	Asp
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Ala	Met	Val	Met	Pro	Pro	Gln	Pro	Val	Val	Leu	Met	Pro	Thr	Val	Tyr
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Ser	Pro	Gly	Met	Val	Pro	Val	Ala	Leu	Pro	Pro	Ala	Ala	Val	Asn	Ala

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His Ala Asn Lys Val Lys Val Leu Asp Ala Pro Val Pro Asp Cys Leu		95
	100	105
Gly Val His Cys Asp Phe His Gln Gly Leu Leu Ser Phe Tyr Asn Ala		110
	115	120
Arg Thr Lys Gln Val Leu His Thr Phe Lys Thr Arg Phe Thr Gln Pro		125
	130	135
Leu Leu Pro Ala Phe Thr Val Trp Cys Gly Ser Phe Gln Val Thr Thr		140
145	150	155
Gly Leu Gln Val Pro Ser Ala Val Arg Cys Leu Gln Lys Arg Gly Ser		160
	165	170
Ala Thr Ser Ser Ser Asn Thr Ser Leu Thr		175
	180	185

&lt;210&gt; 4107

&lt;211&gt; 1442

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 4107

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 Ser Tyr Thr Val Leu Gly Asp Thr Leu Ile Asp Gly Gly Glu His Tyr  
                     35                      40                      45  
 Trp Glu Val Arg Tyr Glu Pro Asp Ser Lys Ala Phe Gly Val Gly Val

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515	520	525
Lys Gly Ser Asp Ile Asn Ile Arg Asp Asn Glu Glu Asn Ile Cys Leu		
530	535	540
His Trp Ala Ala Phe Ser Gly Cys Val Asp Ile Ala Glu Ile Leu Leu		
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Ala Ala Lys Cys Asp Leu His Ala Val Asn Ile His Gly Asp Ser Pro		
565	570	575
Leu His Ile Ala Ala Arg Glu Asn Arg Tyr Asp Cys Val Val Leu Phe		
580	585	590
Leu Ser Arg Asp Ser Asp Val Thr Leu Lys Asn Lys Glu Gly Glu Thr		
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Pro Leu Gln Cys Ala Ser Leu Asn Ser Gln Val Trp Ser Ala Leu Gln		
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Met Ser Lys Ala Leu Gln Asp Ser Ala Pro Asp Arg Pro Ser Pro Val		
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Glu Arg Ile Val Ser Arg Asp Ile Ala Arg Gly Tyr Glu Arg Ile Pro		
645	650	655
Ile Pro Cys Val Asn Ala Val Asp Ser Glu Pro Cys Pro Ser Asn Tyr		
660	665	670
Lys Tyr Val Ser Gln Asn Cys Val Thr Ser Pro Met Asn Ile Asp Arg		
675	680	685
Asn Ile Thr His Leu Gln Tyr Cys Val Cys Ile Asp Asp Cys Ser Ser		
690	695	700
Ser Asn Cys Met Cys Gly Gln Leu Ser Met Arg Cys Trp Tyr Asp Lys		
705	710	715
Asp Gly Arg Leu Leu Pro Glu Phe Asn Met Ala Glu Pro Pro Leu Ile		
725	730	735
Phe Glu Cys Asn His Ala Cys Ser Cys Trp Arg Asn Cys Arg Asn Arg		
740	745	750
Val Val Gln Asn Gly Leu Arg Ala Arg Leu Gln Leu Tyr Arg Thr Arg		
755	760	765
Asp Met Gly Trp Gly Val Arg Ser Leu Gln Asp Ile Pro Pro Gly Thr		
770	775	780
Phe Val Cys Glu Tyr Val Gly Glu Leu Ile Ser Asp Ser Glu Ala Asp		
785	790	795
Val Arg Glu Glu Asp Ser Tyr Leu Phe Asp Leu Asp Asn Lys Asp Gly		
805	810	815
Glu Val Tyr Cys Ile Asp Ala Arg Phe Tyr Gly Asn Val Ser Arg Phe		
820	825	830
Ile Asn His His Cys Glu Pro Asn Leu Val Pro Val Arg Val Phe Met		
835	840	845
Ala His Gln Asp Leu Arg Phe Pro Arg Ile Ala Phe Phe Ser Thr Arg		
850	855	860
Leu Ile Glu Ala Gly Glu Gln Leu Gly Phe Asp Tyr Gly Glu Arg Phe		
865	870	875
Trp Asp Ile Lys Gly Lys Leu Phe Ser Cys Arg Cys Gly Ser Pro Lys		
885	890	895
Cys Arg His Ser Ser Ala Ala Leu Ala Gln Arg Gln Ala Ser Ala Ala		
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Gln Glu Ala Gln Glu Asp Gly Leu Pro Asp Thr Ser Ser Ala Ala Ala		
915	920	925
Ala Thr Pro Tyr Glu Thr Pro Pro Ala Ser Gly Ala Leu Gly Ser Gln		

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Ser	Ala	Gly	Ser	Ala	Glu	Gln	Thr	Ala	Pro	Gly	Asp	Ser	Thr	Gly
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Met	Glu	Val	Ser	Leu	Asp	Ser	Leu	Asp	Leu	Arg	Val	Lys	Gly	Ile
			115				120					125		
Ser	Ser	Gln	Ala	Glu	Gly	Leu	Ala	Asn	Gly	Pro	Asp	Val	Leu	Glu
			130			135					140			
Asp	Gly	Leu	Gln	Glu	Val	Pro	Leu	Cys	Ser	Cys	Arg	Met	Glu	Thr
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Lys	Ser	Arg	Glu	Ile	Thr	Thr	Leu	Ala	Asn	Asn	Gln	Cys	Met	Ala
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Glu	Ser	Val	Asp	His	Glu	Leu	Gly	Arg	Cys	Thr	Asn	Ser	Val	Val
			180				185					190		
Tyr	Glu	Leu	Met	Arg	Pro	Ser	Asn	Lys	Ala	Pro	Leu	Leu	Val	Leu
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Glu	Asp	His	Arg	Gly	Arg	Met	Val	Lys	His	Gln	Cys	Cys	Pro	Gly
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Gly	Tyr	Phe	Cys	Thr	Ala	Gly	Asn	Phe	Met	Glu	Cys	Gln	Pro	Glu
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			260				265						270	
Val	Thr	Ile	Ala	Lys	Ala	Asp	Thr	Thr	Ser	Thr	Val	Thr	Pro	Val
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Leu	Arg	Phe	His	Pro	Lys	Gln	Leu	Tyr	Phe	Ser	Ala	Arg	Gln	Gly
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Leu	Val	Asp	Pro	Lys	Asp	Ala	Glu	Gly	Ser	Thr	Cys	Leu	His	Leu
			465		470				475					480
Ala	Lys	Lys	Gly	His	Tyr	Glu	Val	Val	Gln	Tyr	Leu	Leu	Ser	Asn
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&lt;210&gt; 4104

&lt;211&gt; 978

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 4104

Xaa	Ala	Ala	Phe	Pro	Thr	Glu	Asp	Ser	Arg	Thr	Ser	Lys	Glu	Ser	Met
1				5					10					15	
Ser	Glu	Ala	Asp	Arg	Ala	Gln	Lys	Met	Asp	Gly	Glu	Ser	Glu	Glu	Glu
			20					25					30		
Gln	Glu	Ser	Val	Asp	Thr	Gly	Glu	Glu	Glu	Glu	Gly	Gly	Asp	Glu	Ser
		35					40					45			
Asp	Leu	Ser	Ser	Glu	Ser	Ser	Ile	Lys	Lys	Lys	Ser	Gln	Glu	Glu	Arg
	50						55				60				
Lys	Asp	Arg	Gln	Ser	Leu	Asp	Lys	Pro	Ala	Arg	Lys	Arg	Arg	Arg	Arg



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420  
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1380  
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1440  
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1920

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 536

&lt;210&gt; 4102

&lt;211&gt; 106

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 4102

Met	Cys	Leu	Leu	Ser	Trp	Thr	Arg	Ile	Ala	Val	Trp	Gly	Pro	Ser	Ala
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Arg	Val	Cys	Thr	Arg	Tyr	Lys	Ile	Gln	Glu	Arg	Trp	His	Thr	Ala	Asp
			20					25					30		
Asp	Asp	Arg	Lys	Asp	Thr	Cys	Ser	Pro	Pro	Phe	Pro	Gly	Pro	Arg	His
			35				40					45			
Val	Gln	Asn	Ser	Ser	Trp	Gly	Leu	Gln	Leu	Leu	Gly	Glu	Thr	Gln	Gly
			50				55				60				
Leu	Leu	Leu	His	Ser	Leu	Gln	Gly	Leu	Ser	Arg	Gln	Arg	Pro	Trp	Gly
			65			70				75				80	
Gly	Glu	Ala	Pro	Ala	Trp	Ser	Leu	Pro	Ala	Pro	Pro	Met	Gln	Ala	Val
			85					90					95		
Glu	Gly	Arg	Thr	Arg	Arg	Arg	Thr	Arg	Arg						
			100					105							

&lt;210&gt; 4103

&lt;211&gt; 3040

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 4103

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 cgcgcccaga agatggacgg ggagtccgag gaggagcagg agtccgtgga caccggggag  
 120  
 gaggaggaag gcggtgacga gtctgacctg agttcgaat ccagcattaa gaagaaatct  
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 240

<210> 4099  
 <211> 511  
 <212> DNA  
 <213> Homo sapiens

<400> 4099  
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 120  
 ttaaacaata aaaaattgta taatggaatt ggatcagggg gttcccaaaa ccccttcac  
 180  
 tgagggttgg caattcactg agaaggactc acaggactca gcagatagtc atacttgggg  
 240  
 ctttgattta ttacatttaa tacagcaaaa agacacaaag caacatttga gaaaggaaaa  
 300  
 ggtgcatgtg tcaaagtctg gaggaagcca ggcacaagct acaggagtca tctcctgtgt  
 360  
 agctagcagg atatgcttaa ttccccagc ctcaaatttt gacgacacat gtgcaatgtt  
 420  
 gtctacctta ccagagtttc attagaggct cagcaccat gttttcgatg gaggctagtc  
 480  
 acataggcaa cctctcctct cctcagcg t  
 511

<210> 4100  
 <211> 100  
 <212> PRT  
 <213> Homo sapiens

<400> 4100  
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 Gln Phe Thr Glu Lys Asp Ser Gln Asp Ser Ala Asp Ser His Thr Trp  
 20 25 30  
 Gly Phe Asp Leu Leu His Leu Ile Gln Gln Lys Asp Thr Lys Gln His  
 35 40 45  
 Leu Arg Lys Glu Lys Val His Val Ser Lys Ser Gly Gly Ser Gln Ala  
 50 55 60  
 Gln Ala Thr Gly Val Ile Ser Cys Val Ala Ser Arg Ile Cys Leu Ile  
 65 70 75 80  
 Pro Pro Ala Ser Asn Phe Asp Asp Thr Cys Ala Met Leu Ser Thr Leu  
 85 90 95  
 Pro Glu Phe His  
 100

<210> 4101  
 <211> 536  
 <212> DNA  
 <213> Homo sapiens

<400> 4101

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 1140  
 aacatgtatt tttttctctg atattaagca ggaaggcatt ttaatgtggt gacatcagat  
 1200  
 gttatatttc ctagatgaaa ataaaagtca agcagtgatt agtttcactc actgtcctag  
 1260  
 ctacacttaa tttgaagatt aaaattctac attgtggaaa acaattgaat ttattgggaa  
 1320  
 aaacagcagt cttagatttt gctccttgca tagtaatctt ttgcatgaac catcaccagc  
 1380  
 gttca  
 1385

<210> 4098

<211> 258

<212> PRT

<213> Homo sapiens

<400> 4098

Ser	Gly	Ala	Arg	Ser	Pro	Glu	Pro	Arg	Ala	Gly	Gln	Pro	Pro	Gly	Glu
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Glu	Pro	Arg	Ala	Leu	Gly	Arg	Val	Pro	Arg	Thr	Gly	Thr	Ala	Gly	Ala
			20					25					30		
Arg	Ala	Arg	Leu	His	Asp	Ser	Leu	Arg	Ala	Val	Leu	Thr	Cys	Ser	Thr
		35					40					45			
Met	Ser	Ala	Lys	Ser	Ala	Ile	Ser	Lys	Glu	Ile	Phe	Ala	Pro	Leu	Asp
	50					55					60				
Glu	Arg	Met	Leu	Gly	Ala	Val	Gln	Val	Lys	Arg	Arg	Thr	Lys	Lys	Lys
65					70					75					80
Ile	Pro	Phe	Leu	Ala	Thr	Gly	Gly	Gln	Gly	Glu	Tyr	Leu	Thr	Tyr	Ile
			85					90						95	
Cys	Leu	Ser	Val	Thr	Asn	Lys	Lys	Pro	Thr	Gln	Ala	Ser	Ile	Thr	Lys
			100					105					110		
Val	Lys	Gln	Phe	Glu	Gly	Ser	Thr	Ser	Phe	Val	Arg	Arg	Ser	Gln	Trp
		115					120					125			
Met	Leu	Glu	Gln	Leu	Arg	Gln	Val	Asn	Gly	Ile	Asp	Pro	Asn	Gly	Asp
	130					135					140				
Ser	Ala	Glu	Phe	Asp	Leu	Leu	Phe	Glu	Asn	Ala	Phe	Asp	Gln	Trp	Val
145					150					155					160
Ala	Ser	Thr	Ala	Ser	Glu	Lys	Cys	Thr	Phe	Phe	Gln	Ile	Leu	His	His
			165						170					175	
Thr	Cys	Gln	Arg	Tyr	Leu	Thr	Asp	Arg	Lys	Pro	Glu	Phe	Ile	Asn	Cys
			180					185					190		
Gln	Ser	Lys	Ile	Met	Gly	Gly	Asn	Ser	Ile	Leu	His	Ser	Ala	Ala	Asp
		195					200					205			
Ser	Val	Thr	Ser	Ala	Val	Gln	Lys	Ala	Ser	Gln	Ala	Leu	Asn	Glu	Arg
	210					215					220				
Gly	Glu	Arg	Leu	Gly	Arg	Ala	Glu	Glu	Lys	Thr	Glu	Asp	Leu	Lys	Asn
225					230					235					240
Ser	Ala	Gln	Gln	Phe	Ala	Glu	Thr	Ala	His	Lys	Leu	Ala	Met	Lys	His
			245						250					255	

Lys Cys

&lt;400&gt; 4096

Met Gly Gly Gly Glu Gln Ala Ser Ala Gly Arg Val Pro Lys Arg Gln  
 1 5 10 15  
 Pro Arg Glu Gln Gly Gln Ile Val Gly Gly Gly Phe Ser Ser Thr Val  
 20 25 30  
 Gln Val Arg Lys Leu Arg Leu Lys Arg Asp Gln Val Ala Ser Pro Ala  
 35 40 45  
 Lys Ser Glu Ala Ser Gly Gly Ala Cys Ala Arg Val Ser Gly Ser Val  
 50 55 60  
 Cys Pro Gly Ser Ile Ser Ala Cys Val Cys Leu Ser Arg Gln His Ile  
 65 70 75 80  
 Cys Ala Arg

&lt;210&gt; 4097

&lt;211&gt; 1385

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 4097

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 120  
 cgtgctgtcc tcacttggtc tacaatgagt gccaaatctg ctatcagcaa ggaaatTTTT.  
 180  
 gcacctcttg atgaaaggat gctgggagct gtccaagtca agaggaggac aaagaaaaag  
 240  
 attcctttct tggcaactgg aggtcaaggc gaatatTTAA cttatatctg cctgtcagtg  
 300  
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 360  
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 420  
 cctaattgggg attcggcaga gtttgatttg ttgtttgaaa atgcttttga ccagtgggta  
 480  
 gccagcacag cgtcagaaaa atgcaccttc ttccagatcc tccaccatac ctgccagagg  
 540  
 tacctcacgg acaggaagcc agagtttatt aactgccaat ccaaaattat gggaggaaac  
 600  
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 660  
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 720  
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 780  
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 840  
 aagaattcgg gacctccgct tgcttctttt tttccaatat ttggacactt agagtggttt  
 900  
 ttgttttttc ttttcagatg ttaatgtgaa agaaaggggtg ttgcattttt acatttcct  
 960  
 aatgatcttg ctaataaatg ctacaatagc atcagcttca ttttgggttt ttgcctcctc  
 1020

145                                      150                                      155                                      160  
 Ser Val Asp Lys Ser Lys Pro Trp Ser Arg Ser Ile Glu Asp Leu His  
    165                                      170                                      175  
 Arg Gly Ser Asn Leu Pro Ser Pro Val Gly Asn Ser Val Ser Arg Ser  
    180                                      185                                      190  
 Gly Arg His Ser Ala Leu Arg Tyr Asn Thr Leu Pro Ser Arg Arg Thr  
    195                                      200                                      205  
 Leu Lys Asn Ser Arg Leu Val Ser Lys Lys Asp Asp Val His Val Cys  
    210                                      215                                      220  
 Ile Met Cys Leu Arg Ala Ile Met Asn Tyr Gln Tyr Gly Phe Asn Met  
 225                                      230                                      235                                      240  
 Val Met Ser His Pro His Ala Val Asn Glu Ile Ala Leu Ser Leu Asn  
    245                                      250                                      255  
 Asn Lys Asn Pro Arg Thr Lys Ala Leu Val Leu Glu Leu Leu Ala Ala  
    260                                      265                                      270  
 Val Cys Leu Val Arg Gly Gly His Glu Ile Ile Leu Ser Ala Phe Asp  
    275                                      280                                      285  
 Asn Phe Lys Glu Val Cys Gly Glu Lys Gln Arg Phe Glu Lys Leu Met  
    290                                      295                                      300  
 Glu His Phe Arg Asn Glu Asp Asn Asn Ile Asp Phe Met Val Ala Ser  
 305                                      310                                      315                                      320  
 Met Gln Phe Ile Asn Ile Val Val His Ser Val Glu Asp Met Asn Phe  
    325                                      330                                      335  
 Arg Val His Leu Gln Tyr Glu Phe Thr Lys Leu Gly Leu Asp Glu Tyr  
    340                                      345                                      350  
 Leu Asp Lys Leu Lys His Thr Glu Ser Asp Lys Leu Gln Val Gln Ile  
    355                                      360                                      365  
 Gln Ala Tyr Leu Asp Asn Val Phe Asp Val Gly Ala Leu Leu Glu Asp  
    370                                      375                                      380  
 Ala Glu Thr Lys Asn Ala Ala  
 385                                      390

<210> 4095

<211> 253

<212> DNA

<213> Homo sapiens

<400> 4095

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agggtcagat agtgggggggt gggttcagct ccactgtcca ggtgaggaaa ctgaggctga  
120

agagagatca agtagcatcc ccagcgaaat ctgaggcctc tggaggcgcc tgtgcacgtg  
180

tgtctggaag tgtgtgtcca ggcagcatat ctgcatgtgt gtgctgttcc agacagcata  
240

tctgtgcacg cgt  
253

<210> 4096

<211> 83

<212> PRT

<213> Homo sapiens

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 840  
 aagccctgga gtaggtccat cgaggacctg cacagaggga gcaacctgcc ctcacctgtg  
 900  
 ggcaacagtg tctcccgtc tggaagacat tctgcactgc gatataatac attgccaagc  
 960  
 agaagaactc tgaaaaattc aagattagt agtaagaaag atgatgtgca tgtctgtatc  
 1020  
 atgtgtttac gtgccatcat gaattatcag tatggtttca acatggtcac gtctcatcca  
 1080  
 cagctgtgca atgagattgc actaagcctg aacaacaaga atcccagaac aaaagccctt  
 1140  
 gtcttagaac tgttggcagc cgtttgtctt gtcagaggcg ggcattgaaat cattttatca  
 1200  
 gcatttgata actttaaaaga ggtttgtgga gaaaaacagc gctttgagaa gttgatggaa  
 1260  
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 1320  
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 1380  
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 1519

&lt;210&gt; 4094

&lt;211&gt; 391

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 4094

Met	Gly	Asn	Ala	Gly	Ser	Met	Asp	Ser	Gln	Gln	Thr	Asp	Phe	Arg	Ala
1				5					10					15	
His	Asn	Val	Pro	Leu	Lys	Leu	Pro	Met	Pro	Glu	Pro	Gly	Glu	Leu	Glu
		20					25						30		
Glu	Arg	Phe	Ala	Ile	Val	Leu	Asn	Ala	Met	Asn	Leu	Pro	Pro	Asp	Lys
	35					40					45				
Ala	Arg	Leu	Leu	Arg	Gln	Tyr	Asp	Asn	Glu	Lys	Lys	Trp	Glu	Leu	Ile
	50				55						60				
Cys	Asp	Gln	Glu	Arg	Phe	Gln	Val	Lys	Asn	Pro	Pro	His	Thr	Tyr	Ile
65				70					75					80	
Gln	Lys	Leu	Lys	Gly	Tyr	Leu	Asp	Pro	Ala	Val	Thr	Arg	Lys	Lys	Phe
			85					90					95		
Arg	Arg	Arg	Val	Gln	Glu	Ser	Thr	Gln	Val	Leu	Arg	Glu	Leu	Glu	Ile
		100					105					110			
Ser	Leu	Arg	Thr	Asn	His	Ile	Gly	Trp	Val	Arg	Glu	Phe	Leu	Asn	Glu
	115				120						125				
Glu	Asn	Lys	Gly	Leu	Asp	Val	Leu	Val	Glu	Tyr	Leu	Ser	Phe	Ala	Gln
	130				135						140				
Tyr	Ala	Val	Thr	Phe	Asp	Phe	Glu	Ser	Val	Glu	Ser	Thr	Val	Glu	Ser

&lt;213&gt; Homo sapiens

&lt;400&gt; 4092

His Gly Gly Tyr Thr Gly Ser Gly Pro Gly Phe Gly Glu Pro Arg Asp  
 1 5 10 15  
 Ser Gly Ala Glu Val Pro Ser Gly Ser Gly Arg Ala Thr Gly Cys Glu  
 20 25 30  
 Arg Gly Gly Val Arg Gly Ala Arg Gln Gly Arg Ala Pro Gly Ser Ser  
 35 40 45  
 Ile Trp Arg Lys Glu Pro Arg Met Val Cys Thr Arg Lys Thr Lys Thr  
 50 55 60  
 Leu Val Ser Thr Cys Val Ile Leu Ser Gly Met Thr Asn Ile Ile Cys  
 65 70 75 80  
 Leu Leu Tyr Val Gly Trp Val Thr Asn Tyr Ile Ala Ser Val Tyr Val  
 85 90 95  
 Arg Gly Gln Glu Pro Ala Pro Asp Lys Lys Leu Glu Glu Asp Lys Gly  
 100 105 110  
 Asp Thr Leu Lys Ile Ile Glu Arg Leu Asp His Leu Glu Asn Val Ile  
 115 120 125  
 Lys Gln His Ile Gln Gly Tyr Arg Arg Asn Phe Ser Leu Leu Asn Val  
 130 135 140  
 Ser Asn  
 145

&lt;210&gt; 4093

&lt;211&gt; 1519

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 4093

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 ggcagggggc ggtgtgcagc ggaaccatgc acataggcgc ccacgccgac taccctccc  
 120  
 gaggaaga ggccggggcg cgctgggggg tgagagcatg agggaggccg gggggggctg  
 180  
 ctggagcgc tgctaggag cggtgccgcc gcacaccgc ctgggcgcg cgaggggcg  
 240  
 ggagcgggca ggtcgcgcct cggcgagcg accgccggga gctgttctga tttccgacgc  
 300  
 gcacctagg gcccggagca gccccgcgc cggcgcgccg ccgacatggg caacgcaggg  
 360  
 agcatggatt cgcagcagac cgatttcagg gcgcacaacg tgcctttgaa gctgccgatg  
 420  
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&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 4086

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&lt;211&gt; 362

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 4084

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1200  
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1260  
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&lt;210&gt; 4082

&lt;211&gt; 215

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 4082

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 1             5             10             15
Pro Ser Leu Tyr Pro Gly Leu Phe Leu Phe Thr Thr Pro Cys Arg Leu
      20             25             30
Val Arg Pro Val Gln Asn Leu Ala Leu Gly Lys Glu Glu Leu Ile Gly
      35             40             45
Thr Met Glu Gln Ile Phe Met Asn Val Ala Ile Phe Glu Asp Glu Val
      50             55             60
Phe Ala Gly Val Thr Thr His Gln Glu Leu Phe Pro His Ser Leu Leu
      65             70             75             80
Ser Val Ile Ala Asn Phe Ile Pro Phe Ser Asp His Asn Gln Ser Pro
      85             90             95
Arg Asn Met Tyr Gln Cys Gln Met Gly Lys Gln Thr Met Gly Phe Pro
      100            105            110
Leu Leu Thr Tyr Gln Asp Arg Ser Asp Asn Lys Leu Tyr Arg Leu Gln
      115            120            125
Thr Pro Gln Ser Pro Leu Val Arg Pro Ser Met Tyr Asp Tyr Tyr Asp
      130            135            140
Met Asp Asn Tyr Pro Ile Gly Thr Asn Ala Ile Val Ala Val Ile Ser
      145            150            155            160
Tyr Thr Gly Tyr Asp Met Glu Asp Ala Met Ile Val Asn Lys Ala Ser
      165            170            175
Trp Glu Arg Gly Phe Ala His Gly Ser Val Tyr Lys Ser Glu Phe Ile
      180            185            190
Asp Leu Ser Glu Lys Ile Lys Gln Gly Asp Ser Ser Leu Val Phe Gly
      195            200            205
Ile Lys Pro Gly Asp Pro Arg
      210            215

```

&lt;210&gt; 4083

&lt;211&gt; 2983

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 4083

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120
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240
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360

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 783

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 <213> Homo sapiens

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 Leu Thr Pro Ser Val Cys Leu Pro Ser Lys Leu His Cys Pro Asn Arg  
 35 40 45  
 Glu Ala Leu His Ala Gln Pro Gly Glu Gln Gly Trp Met Gly Leu Lys  
 50 55 60  
 Arg Ala Gln Pro Ser Pro Glu Arg Thr Leu His Ser Asn Leu Pro Gln  
 65 70 75 80  
 Ser Trp Gly Lys His Glu Gly Cys Pro Ser Thr Glu Val Asn Pro Gly  
 85 90 95  
 His Ala Arg Thr Lys  
 100

<210> 4081  
 <211> 645  
 <212> DNA  
 <213> Homo sapiens

<400> 4081  
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 120  
 ttgggcaaag aagagctaatt tggaactatg gaacagatct tcatgaatgt cgctatcttt  
 180  
 gaggatgaag tttttgctgg agttaccaca caccaggaac tctttccaca cagcctgctg  
 240  
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 300  
 caatgccaga tgggtaagca aactatgggc tttccacttc tcacttatca agaccgatcg  
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 420  
 gattattatg acatggataa ctatccaatt gggaccaatg ccatcgttgc tgtgatttct  
 480  
 tacactggct atgatatgga agatgccatg attgtgaata aggcctcttg ggaacgaggg  
 540  
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 600  
 ggagatagta gcctggtggt tggcatcaaa cctggtgacc cacgc  
 645

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 Arg Glu Ile Asn Pro Leu Leu Phe Ser Tyr Val Glu Glu Leu Val Glu  
 35 40 45  
 Ile Arg Lys Leu Arg Gln Asp Ile Leu Leu Met Lys Pro Tyr Phe Ile  
 50 55 60  
 Thr Cys Arg Glu Ala Met Glu Ala Arg Leu Leu Leu Gln Leu Gln Asp  
 65 70 75 80  
 Arg Gln His Phe Val Glu Asn Asp Glu Met Tyr Ser Val Gln Asp Leu  
 85 90 95  
 Leu Asp Val His Ala Gly Arg Leu Gly Cys Ser Leu Thr Glu Ile His  
 100 105 110  
 Thr Leu Phe Ala Lys His Ile Lys Leu Asp Cys Glu Arg Cys Gln Ala  
 115 120 125  
 Lys Gly Phe Val Cys Glu Leu Cys Arg Glu Gly Asp Val Leu Phe Pro  
 130 135 140  
 Phe Asp Ser His Thr Ser Val Cys Ala Asp Cys Ser Ala Val Phe His  
 145 150 155 160  
 Arg Asp Cys Tyr Tyr Asp Asn Ser Thr Thr Cys Pro Lys Cys Ala Arg  
 165 170 175  
 Leu Ser Leu Arg Lys Gln Ser Leu Phe Gln Glu Pro Gly Pro Asp Val  
 180 185 190  
 Glu Ala

&lt;210&gt; 4079

&lt;211&gt; 783

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 4079

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 180  
 gttagaatgc agagttctct ccggagatgg ctgagctctc tttaggcca tccaccctg  
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 720

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305          310          315          320
Met Gly Gly Met Gln Ala Ser Met Met Gly Val Pro Asn Gly Met Met
          325          330          335
Thr Thr Gln Gln Ala Gly Tyr Met Ala Gly Met Ala Ala Met Pro Gln
          340          345          350
Thr Val Tyr Gly Val Gln Pro Ala Gln Gln Leu Gln Trp Asn Leu Thr
          355          360          365
Gln Met Thr Gln Gln Met Ala Gly Met Asn Phe Tyr Gly Ala Asn Gly
          370          375          380
Met Met Asn Tyr Gly Gln Ser Met Ser Gly Gly Asn Gly Gln Ala Ala
385          390          395          400
Asn Gln Thr Leu Ser Pro Gln Met Trp Lys
          405          410

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&lt;210&gt; 4077

&lt;211&gt; 684

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 4077

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120
agctacgtgg aggagctggg ggagattcgc aagctgcgcc aggacatcct gctcatgaag
180
ccgtacttca tcacctgcag ggaggccatg gaggctcgtc tgctgctgca gctccaggat
240
cggcagcatt ttgtggagaa cgacgagatg tactctgtcc aggacctcct ggacgtgcat
300
gccggccgcc tgggctgctc gctcaccgag atccacacgc tcttcgcca gcacatcaag
360
ctggactgag agcgggtgcca ggccaagggc ttcgtgtgtg agctctgcag agagggcgac
420
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480
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540
aagcagtcgc tcttcagga gccaggtccc gatgtggagg cctagcgccg aggaacagtg
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684

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&lt;210&gt; 4078

&lt;211&gt; 194

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 4078

```

Arg Val Val His Asn Trp Asp Phe Glu Pro Arg Lys Val Ser Arg Cys
1          5          10          15
Ser Met Arg Tyr Leu Ala Leu Met Val Ser Arg Pro Val Leu Arg Leu

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 2460  
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 2492

<210> 4076  
 <211> 410  
 <212> PRT  
 <213> Homo sapiens

<400> 4076  
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 Ala Gly Ile His Arg Asn Leu Gly Val His Ile Ser Arg Val Lys Ser  
 35 40 45  
 Val Asn Leu Asp Gln Trp Thr Gln Glu Gln Ile Gln Cys Met Gln Glu  
 50 55 60  
 Met Gly Asn Gly Lys Ala Asn Arg Leu Tyr Glu Ala Tyr Leu Pro Glu  
 65 70 75 80  
 Thr Phe Arg Arg Pro Gln Ile Asp Pro Ala Val Glu Gly Phe Ile Arg  
 85 90 95  
 Asp Lys Tyr Glu Lys Lys Lys Tyr Met Asp Arg Ser Leu Asp Ile Asn  
 100 105 110  
 Ala Phe Arg Lys Glu Lys Asp Asp Lys Trp Lys Arg Gly Ser Glu Pro  
 115 120 125  
 Val Pro Glu Lys Lys Leu Glu Pro Val Val Phe Glu Lys Val Lys Met  
 130 135 140  
 Pro Gln Lys Lys Glu Asp Pro Gln Leu Pro Arg Lys Ser Ser Pro Lys  
 145 150 155 160  
 Ser Thr Ala Pro Val Met Asp Leu Leu Gly Leu Asp Ala Pro Val Ala  
 165 170 175  
 Cys Ser Ile Ala Asn Ser Lys Thr Ser Asn Thr Leu Glu Lys Asp Leu  
 180 185 190  
 Asp Leu Leu Ala Ser Val Pro Ser Pro Ser Ser Ser Gly Ser Arg Lys  
 195 200 205  
 Val Val Gly Ser Met Pro Thr Ala Gly Ser Ala Gly Ser Val Pro Glu  
 210 215 220  
 Asn Leu Asn Leu Phe Pro Glu Pro Gly Ser Lys Ser Glu Glu Ile Gly  
 225 230 235 240  
 Lys Lys Gln Leu Ser Lys Asp Ser Ile Leu Ser Leu Tyr Gly Ser Gln  
 245 250 255  
 Thr Pro Gln Met Pro Thr Gln Ala Met Phe Met Ala Pro Ala Gln Met  
 260 265 270  
 Ala Tyr Pro Thr Ala Tyr Pro Ser Phe Pro Gly Val Thr Pro Pro Asn  
 275 280 285  
 Ser Ile Met Gly Ser Met Met Pro Pro Pro Val Gly Met Val Ala Gln  
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 Pro Gly Ala Ser Gly Met Val Ala Pro Met Ala Met Pro Ala Gly Tyr

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2280



```

                260                265                270
Leu Ser Ala Phe His Ala Gly Arg Lys Gly Ser Val Ala Lys Lys Pro
                275                280                285
Tyr Asn Pro Ile Leu Gly Glu Ile Phe Gln Cys His Trp Thr Leu Pro
                290                295                300
Asn Asp Thr Glu Glu Asn Thr Glu Leu Val Ser Glu Gly Pro Val Pro
305                310                315                320
Trp Val Ser Lys Asn Ser Val Thr Phe Val Ala Glu Gln Val Ser His
                325                330                335
His Pro Pro Ile Ser Ala Phe Tyr Ala Glu Cys Phe Asn Lys Lys Ile
                340                345                350
Gln Phe Asn Ala His Ile Trp Thr Lys Ser Lys Phe Leu Gly Met Ser
                355                360                365
Ile Gly Val His Asn Ile Gly Gln Gly Cys Val Ser Cys Leu Asp Tyr
                370                375                380
Asp Glu His Tyr Ile Leu Thr Phe Pro Asn Gly Tyr Gly Arg Ser Ile
385                390                395                400
Leu Thr Val Pro Trp Val Glu Leu Gly Gly Glu Cys Asn Ile Asn Cys
                405                410                415
Ser Lys Thr Gly Tyr Ser Ala Asn Ile Ile Phe His Thr Lys Pro Phe
                420                425                430
Tyr Gly Gly Lys Lys His Arg Ile Thr Ala Glu Ile Phe Ser Pro Asn
                435                440                445
Asp Lys Lys Ser Phe Cys Ser Ile
                450                455

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&lt;210&gt; 4075

&lt;211&gt; 2492

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 4075

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660

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 attg  
 1864

&lt;210&gt; 4074

&lt;211&gt; 456

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 4074

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Asp	Gln	Ser	Asn	Ala	Glu	Lys	His	Ala	Asp	Gly	Met	Ile	Ser	Thr	Ile
			20					25					30		
Asn	Pro	Val	Asp	Ala	Ile	Tyr	Gln	Pro	Ser	Pro	Leu	Glu	Pro	Val	Ile
		35					40					45			
Ser	Thr	Met	Pro	Ser	Gln	Thr	Val	Leu	Pro	Pro	Glu	Pro	Val	Gln	Leu
	50					55					60				
Cys	Lys	Ser	Glu	Gln	Arg	Pro	Ser	Ser	Leu	Pro	Val	Gly	Pro	Val	Leu
65				70					75					80	
Ala	Thr	Leu	Gly	His	His	Gln	Thr	Pro	Thr	Pro	Asn	Ser	Thr	Gly	Ser
				85				90						95	
Gly	His	Ser	Pro	Pro	Ser	Ser	Ser	Leu	Thr	Ser	Pro	Ser	His	Val	Asn
			100					105					110		
Leu	Ser	Pro	Asn	Thr	Val	Pro	Glu	Phe	Ser	Tyr	Ser	Ser	Ser	Glu	Asp
		115					120					125			
Glu	Phe	Tyr	Asp	Ala	Asp	Glu	Phe	His	Gln	Ser	Gly	Ser	Ser	Pro	Lys
	130					135					140				
Arg	Leu	Ile	Asp	Ser	Ser	Gly	Ser	Ala	Ser	Val	Leu	Thr	His	Ser	Ser
145				150						155				160	
Ser	Gly	Asn	Ser	Leu	Lys	Arg	Pro	Asp	Thr	Thr	Glu	Ser	Leu	Asn	Ser
			165					170						175	
Ser	Leu	Ser	Asn	Gly	Thr	Ser	Asp	Ala	Asp	Leu	Phe	Asp	Ser	His	Asp
			180					185					190		
Asp	Arg	Asp	Asp	Asp	Ala	Glu	Ala	Gly	Ser	Val	Glu	Glu	His	Lys	Ser
	195						200					205			
Val	Ile	Met	His	Leu	Leu	Ser	Gln	Val	Arg	Leu	Gly	Met	Asp	Leu	Thr
	210					215					220				
Lys	Val	Val	Leu	Pro	Thr	Phe	Ile	Leu	Glu	Arg	Arg	Ser	Leu	Leu	Glu
225					230					235				240	
Met	Tyr	Ala	Asp	Phe	Phe	Ala	His	Pro	Asp	Leu	Phe	Val	Ser	Ile	Ser
			245					250						255	
Asp	Gln	Lys	Asp	Pro	Lys	Asp	Arg	Met	Val	Gln	Val	Val	Lys	Trp	Tyr

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 4073

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720  
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&lt;210&gt; 4072

&lt;211&gt; 175

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 4072

Met	Val	His	Arg	Arg	Gly	Trp	Pro	Ser	Cys	Leu	Ala	Arg	Gly	Gly	Arg
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Cys	Ala	Leu	Val	Pro	Arg	Leu	Val	Arg	Met	Lys	Val	Phe	His	Leu	Ser
			20					25					30		
Leu	Ser	Gln	Ser	Val	Val	Leu	Arg	His	His	Trp	Ile	Leu	Pro	Phe	Val
		35					40					45			
Gln	Ala	Leu	Lys	Ala	Arg	Met	Thr	Ser	Phe	His	Arg	Phe	Phe	Phe	Thr
	50					55				60					
Ala	Asn	Gln	Val	Lys	Ile	Tyr	Thr	Asn	Gln	Glu	Lys	Thr	Arg	Thr	Phe
65					70				75					80	
Ile	Gly	Leu	Glu	Val	Thr	Ser	Gly	His	Ala	Gln	Phe	Leu	Asp	Leu	Val
			85					90					95		
Ser	Glu	Val	Asp	Arg	Val	Met	Glu	Glu	Phe	Asn	Leu	Thr	Thr	Phe	Tyr
			100					105					110		
Gln	Asp	Pro	Ser	Phe	His	Leu	Ser	Leu	Ala	Trp	Cys	Val	Gly	Asp	Ala
	115						120					125			
Arg	Leu	Gln	Leu	Glu	Gly	Gln	Cys	Leu	Gln	Glu	Leu	Gln	Ala	Ile	Val
	130					135					140				
Asp	Gly	Phe	Glu	Asp	Ala	Glu	Val	Leu	Leu	Arg	Val	His	Thr	Glu	Gln
145					150					155				160	
Val	Arg	Cys	Lys	Ser	Gly	Asn	Lys	Phe	Phe	Ser	Met	Pro	Leu	Lys	
				165					170					175	

&lt;210&gt; 4073

&lt;211&gt; 1864

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&lt;210&gt; 4070

&lt;211&gt; 113

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 4070

Met	Ser	Tyr	Pro	Ala	Lys	Val	Thr	Leu	Leu	Gly	Ser	Val	Ile	Phe	Thr
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Phe	Gln	His	Thr	Gln	His	Leu	Ala	Ile	Ser	Lys	His	Asn	Leu	Met	Phe
			20				25					30			
Leu	Tyr	Thr	Ile	Phe	Ile	Val	Ala	Thr	Lys	Ile	Thr	Met	Met	Thr	Thr
		35					40				45				
Gln	Thr	Ser	Thr	Met	Thr	Phe	Ala	Pro	Phe	Glu	Asp	Thr	Leu	Ser	Trp
		50				55				60					
Met	Leu	Phe	Gly	Trp	Gln	Gln	Pro	Phe	Ser	Ser	Cys	Glu	Lys	Lys	Ser
65				70				75			80				
Glu	Ala	Lys	Ser	Pro	Ser	Asn	Gly	Val	Gly	Ser	Leu	Ala	Ser	Lys	Pro
			85				90				95				
Val	Asp	Val	Ala	Ser	Asp	Asn	Val	Lys	Lys	Lys	His	Thr	Lys	Lys	Asn
			100				105				110				

Glu

&lt;210&gt; 4071

&lt;211&gt; 601

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 4071

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 180 185 190  
 Leu Gln Tyr Ala Asp Pro Val Asn Ala His Tyr Ala Lys Met Ala Leu  
 195 200 205  
 Asp Gly Gln Asn Ile Tyr Asn Ala Cys Cys Thr Leu Arg Ile Asp Phe  
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 Ser Lys Leu Thr Ser Leu Asn Val Lys Tyr Asn Asn Asp Lys Ser Arg  
 225 230 235 240  
 Asp Phe Thr Arg Leu Asp Leu Pro Thr Gly Asp Gly Gln Pro Ser Leu  
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 Glu Pro Pro Met Ala Ala Ala Phe Gly Ala Pro Gly Ile Ile Ser Ser  
 260 265 270  
 Pro Tyr Ala Gly Ala Ala Gly Phe Ala Pro Ala Ile Gly Phe Pro Gln  
 275 280 285  
 Ala Thr Gly Leu Ser Val Pro Ala Val Pro Gly Ala Leu Gly Pro Leu  
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 Thr Ile Thr Ser Ser Ala Val Thr Gly Arg Met Ala Ile Pro Gly Ala  
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 Ser Gly Ile Pro Gly Asn Ser Val Leu Leu Val Thr Asn Leu Asn Pro  
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 Asp Val His Arg Val Lys Ile Met Phe Asn Lys Lys Glu Asn Ala Leu  
 355 360 365  
 Val Gln Met Ala Asp Ala Asn Gln Ala Gln Leu Ala Met Asn His Leu  
 370 375 380  
 Ser Gly Gln Arg Leu Tyr Gly Lys Val Leu Arg Ala Thr Leu Ser Lys  
 385 390 395 400  
 His Gln Ala Val Gln Leu Pro Arg Glu Gly Gln Glu Asp Gln Gly Leu  
 405 410 415  
 Thr Lys Asp Phe Ser Asn Ser Pro Leu His Arg Phe Lys Lys Pro Gly  
 420 425 430  
 Ser Lys Asn Phe Gln Asn Ile Phe Pro Pro Ser Ala Thr Leu His Leu  
 435 440 445  
 Ser Asn Ile Pro Pro Ser Val Thr Val Asp Asp Leu Lys Asn Leu Phe  
 450 455 460  
 Ile Glu Ala Gly Cys Ser Val Lys Ala Phe Lys Phe Phe Gln Lys Asp  
 465 470 475 480  
 Arg Lys Met Ala Leu Ile Gln Leu Gly Ser Val Glu Glu Ala Ile Gln  
 485 490 495  
 Ala Leu Ile Glu Leu His Asn His Asp Leu Gly Glu Asn His His Leu  
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 Arg Val Ser Phe Ser Lys Ser Thr Ile  
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&lt;210&gt; 4069

&lt;211&gt; 714

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 4069

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&lt;210&gt; 4068

&lt;211&gt; 521

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 4068

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Phe	Lys	Arg	Asp	Arg	Pro	Pro	Cys	Ser	Pro	Ser	Arg	Val	Leu	His	Leu
		20					25					30			
Arg	Lys	Ile	Pro	Cys	Asp	Val	Thr	Glu	Ala	Glu	Ile	Ile	Ser	Leu	Gly
	35					40					45				
Leu	Pro	Phe	Gly	Lys	Val	Thr	Asn	Leu	Leu	Met	Leu	Lys	Gly	Lys	Ser
	50				55					60					
Gln	Ala	Phe	Leu	Glu	Met	Ala	Ser	Glu	Glu	Ala	Ala	Val	Thr	Met	Val
65				70					75					80	
Asn	Tyr	Tyr	Thr	Pro	Ile	Thr	Pro	His	Leu	Arg	Ser	Gln	Pro	Val	Tyr
		85					90					95			
Ile	Gln	Tyr	Ser	Asn	His	Arg	Glu	Leu	Lys	Thr	Asp	Asn	Leu	Pro	Asn
	100					105					110				
Gln	Ala	Arg	Ala	Gln	Ala	Ala	Leu	Gln	Ala	Val	Ser	Ala	Val	Gln	Ser
	115					120					125				
Gly	Ser	Leu	Ala	Leu	Ser	Gly	Gly	Pro	Ser	Asn	Glu	Gly	Thr	Val	Leu
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Pro	Gly	Gln	Ser	Pro	Val	Leu	Arg	Ile	Ile	Ile	Glu	Asn	Leu	Phe	Tyr

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<210> 4066
<211> 210
<212> PRT
<213> Homo sapiens
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<400> 4066															
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Ala	Ala	Phe	Leu	Phe	Leu	Leu	Val	Val	Arg	Leu	Val	Asn	Glu	Val	Asn
		20						25					30		
Phe	Pro	Leu	Leu	Leu	Asn	Cys	Phe	Gly	Gln	Pro	Gly	Thr	Lys	Trp	Ile
		35					40					45			
Pro	Phe	Ser	Tyr	Thr	Tyr	Arg	Arg	Pro	Leu	Arg	Thr	His	Tyr	Gly	Tyr
	50					55					60				
Ile	Asn	Val	Lys	Thr	Gln	Glu	Pro	Leu	Gln	Leu	Asp	Cys	Asp	Leu	Cys
65					70					75				80	
Ala	Ile	Val	Ser	Asn	Ser	Gly	Gln	Met	Val	Gly	Gln	Lys	Val	Gly	Asn
				85					90					95	
Glu	Ile	Asp	Arg	Ser	Ser	Cys	Ile	Trp	Arg	Met	Asn	Asn	Ala	Pro	Thr

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Tyr Gln Arg Val Lys Asp Leu Cys Gln Arg Ala Glu Tyr Gln Thr Ala
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Cys Glu Gln Leu Gly Gln Lys Trp Gln Cys Val Glu Asp Ala Thr Gly
      405      410      415
Lys Leu Lys Leu His Lys Cys Lys Gly Pro Met Arg Leu Gly Gly Ser
      420      425      430
Arg Ala Leu Ser Asn Leu Val Pro Lys Tyr Tyr Gly Gln Gly Ser Glu
      435      440      445
Ala Cys Thr Cys Asp Ser Gly Asp Tyr Lys Leu Ser Leu Ala Gly Arg
      450      455      460
Arg Lys Lys Xaa Leu Gln Glu Glu Xaa Tyr Lys Ala Ser Tyr Val Arg
465      470      475      480
Asn Arg Ser Ile Arg Ser Val Ala Ile Glu Val Asp Gly Arg Val Tyr
      485      490      495
His Val Gly Leu Gly Asp Ala Ala Gln Pro Arg Asn Leu Thr Lys Arg
      500      505      510
His Trp Pro Gly Ala Pro Glu Asp Gln Asp Asp Lys Asp Gly Gly Asp
      515      520      525
Xaa Ser Val Ala Leu Glu Ala Phe Pro Thr Thr Gln Pro Pro Thr Xaa
      530      535      540
Ile Lys Val Thr His Arg Cys Tyr Ile Leu Glu Asn Asp Thr Val Gln
545      550      555      560
Cys Asp Leu Asp Leu Tyr Lys Ser Leu Gln Ala Trp Lys Asp His Lys
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Leu His Ile Asp His Glu Ile Glu Thr Leu Gln Asn Lys Ile Lys Asn
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Leu Arg Glu Val Arg Gly His Leu Lys Lys Lys Arg Pro Glu Glu Cys
      595      600      605
Asp Cys His Lys Ile Ser Tyr His Thr Gln His Lys Gly Arg Leu Lys
      610      615      620
His Arg Gly Ser Ser Leu His Pro Phe Arg Lys Gly Leu Gln Glu Lys
625      630      635      640
Asp Lys Val Trp Leu Leu Arg Glu Gln Lys Arg Lys Lys Lys Leu Arg
      645      650      655
Lys Leu Leu Lys Arg Leu Gln Asn Asn Asp Thr Cys Ser Met Pro Gly
      660      665      670
Leu Thr Cys Phe Thr His Asp Asn Gln His Trp Gln Thr Ala Pro Phe
      675      680      685
Trp Thr Leu Gly Pro Phe Cys Ala Cys Thr Ser Ala Asn Asn Asn Thr
      690      695      700
Tyr Trp Cys Met Arg Thr Ile Asn Glu Thr His Asn Phe Leu Phe Cys
705      710      715      720
Glu Phe Ala Thr Gly Phe Leu Glu Tyr Phe Asp Leu Asn Thr Asp Pro
      725      730      735
Tyr Gln Leu Met Asn Ala Val Asn Thr Leu Asp Arg Asp Val Leu Asn
      740      745      750
Gln Leu His Val Gln Leu Met Glu Leu Arg Ser Cys Lys Gly Tyr Lys
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Gln Cys Asn Pro Arg Thr Arg Asn Met Asp Leu Gly Leu Lys Asp Gly
      770      775      780
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785      790      795      800
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<210> 4064  
 <211> 818  
 <212> PRT  
 <213> Homo sapiens

<400> 4064

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		20						25					30		
Met	Cys	Cys	Pro	Ser	Arg	Ser	Ser	Ile	Leu	Thr	Gly	Lys	Tyr	Val	His
		35					40					45			
Asn	His	Asn	Thr	Tyr	Thr	Asn	Asn	Glu	Asn	Cys	Ser	Ser	Pro	Ser	Trp
	50					55					60				
Gln	Ala	Gln	His	Glu	Ser	Arg	Thr	Phe	Ala	Val	Tyr	Leu	Asn	Ser	Thr
65					70					75				80	
Gly	Tyr	Arg	Thr	Ala	Phe	Phe	Gly	Lys	Tyr	Leu	Asn	Glu	Tyr	Asn	Gly
			85						90					95	
Ser	Tyr	Val	Pro	Gly	Trp	Lys	Glu	Trp	Val	Gly	Leu	Leu	Lys	Asn	
		100					105						110		
Ser	Arg	Phe	Tyr	Asn	Tyr	Thr	Leu	Cys	Arg	Asn	Gly	Val	Lys	Glu	Lys
		115					120					125			
His	Gly	Ser	Asp	Tyr	Ser	Lys	Asp	Tyr	Leu	Thr	Asp	Leu	Ile	Thr	Asn
	130					135					140				
Asp	Ser	Val	Ser	Phe	Phe	Arg	Thr	Ser	Lys	Lys	Met	Tyr	Pro	His	Arg
145					150					155					160
Pro	Val	Leu	Met	Val	Ile	Ser	His	Ala	Ala	Pro	His	Gly	Pro	Glu	Asp
			165						170					175	
Ser	Ala	Pro	Gln	Tyr	Ser	Arg	Leu	Phe	Pro	Asn	Ala	Ser	Gln	His	Ile
		180						185					190		
Thr	Pro	Ser	Tyr	Asn	Tyr	Ala	Pro	Asp	Pro	Asp	Lys	His	Trp	Ile	Met
		195					200						205		
Arg	Tyr	Thr	Gly	Pro	Met	Lys	Pro	Ile	His	Met	Glu	Phe	Thr	Asn	Met
	210					215					220				
Leu	Gln	Arg	Lys	Arg	Leu	Gln	Thr	Leu	Met	Ser	Val	Asp	Asp	Ser	Met
225					230					235					240
Glu	Thr	Ile	Tyr	Asn	Met	Leu	Val	Glu	Thr	Gly	Glu	Leu	Asp	Asn	Thr
			245						250					255	
Tyr	Ile	Val	Tyr	Thr	Ala	Asp	His	Gly	Tyr	His	Ile	Gly	Gln	Phe	Gly
		260						265					270		
Leu	Val	Lys	Gly	Lys	Ser	Met	Pro	Tyr	Glu	Phe	Asp	Ile	Arg	Val	Pro
		275					280					285			
Phe	Tyr	Val	Arg	Gly	Pro	Asn	Val	Glu	Ala	Gly	Cys	Leu	Asn	Pro	His
	290					295					300				
Ile	Val	Leu	Asn	Ile	Asp	Leu	Ala	Pro	Thr	Ile	Leu	Asp	Ile	Ala	Gly
305					310					315					320
Leu	Asp	Ile	Pro	Ala	Asp	Met	Asp	Gly	Lys	Ser	Ile	Leu	Lys	Leu	Leu
			325						330					335	
Asp	Thr	Glu	Arg	Pro	Val	Asn	Arg	Phe	His	Leu	Lys	Lys	Lys	Met	Arg
		340						345					350		
Val	Trp	Arg	Asp	Ser	Phe	Leu	Val	Glu	Arg	Gly	Lys	Leu	Leu	His	Lys
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Arg	Asp	Asn	Asp	Lys	Val	Asp	Ala	Gln	Glu	Glu	Asn	Phe	Leu	Pro	Lys

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      625      630      635
Gly Glu Arg Pro Phe Gln Cys Ala Leu Cys Gly Lys Ser Phe Ile Arg
      645      650      655
Lys Gln Asn Leu Leu Lys His Gln Arg Ile His Thr Gly Glu Arg Pro
      660      665      670
Tyr Thr Cys Gly Glu Cys Gly Lys Ser Phe Arg Tyr Lys Glu Ser Leu
      675      680      685
Lys Asp His Leu Arg Val His Ser Gly Gly Pro Gly Pro Gly Ala Pro
      690      695      700
Arg Gln Leu Pro Pro Pro Pro Glu Arg Asp
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&lt;210&gt; 4061

&lt;211&gt; 519

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 4061

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&lt;210&gt; 4062

&lt;211&gt; 165

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 4062

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&lt;210&gt; 4060

&lt;211&gt; 714

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 4060

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&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 4057

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&lt;210&gt; 4058

&lt;211&gt; 157

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 4058

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Phe	Ser	Asn	Ile	Ser	Ser	Ile	Tyr	Gln	Phe	His	Ser	Gln	Phe	Phe	Leu
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Gly	Asp	Val	Ile	Gln	Lys	Leu	Ala	Pro	Phe	Leu	Lys	Met	Tyr	Ser	Glu
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			85					90					95		
Asp	Lys	Ser	Pro	Leu	Phe	Gln	Glu	Val	Leu	Thr	Arg	Ile	Gln	Val	Arg
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&lt;211&gt; 3994

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&lt;211&gt; 533

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Ser Cys Arg Ala Ser Thr Leu Leu Ala Glu Leu Asp Asp Glu Asp		1485
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&lt;212&gt; PRT

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<210> 4046

<211> 437

<212> PRT

<213> Homo sapiens

<400> 4046

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Cys	Leu	Ile	Cys	Gly	Thr	Glu	Ser	Arg	Lys	Phe	Asp	Pro	Phe	Leu	Asp
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<210> 4044

<211> 219

<212> PRT

<213> Homo sapiens

<400> 4044

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 Arg Lys Glu Glu Leu Arg Arg Lys Ala Leu Glu Glu Lys Arg Arg  
 35 40 45  
 Lys Glu Glu Leu Val Lys Lys Arg Ile Glu Leu Lys His Asp Lys Lys  
 50 55 60  
 Ala Arg Ala Met Ala Lys Arg Thr Lys Asp Asn Phe His Gly Tyr Asn  
 65 70 75 80  
 Gly Ile Pro Ile Glu Glu Lys Ser Lys Lys Arg Gln Ala Thr Glu Ser  
 85 90 95  
 His Thr Ser Gln Gly Thr Asp Arg Glu Tyr Glu Met Glu Glu Asn  
 100 105 110  
 Glu Phe Leu Glu Tyr Asn His Ala Glu Ser Glu Gln Glu Tyr Glu Glu  
 115 120 125  
 Glu Gln Glu Pro Pro Lys Val Glu Ser Lys Pro Lys Val Ser Leu Lys  
 130 135 140  
 Gly Ala Pro Pro Pro Met Asn Phe Thr Asp Leu Leu Arg Leu Ala Glu  
 145 150 155 160  
 Lys Lys Gln Phe Glu Pro Val Glu Ile Lys Val Val Lys Lys Ser Glu  
 165 170 175  
 Glu Arg Pro Met Thr Ala Glu Glu Leu Arg Glu Arg Glu Phe Leu Glu  
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<210> 4045

<211> 2217

<212> DNA

<213> Homo sapiens

<400> 4045

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&lt;213&gt; Homo sapiens

&lt;400&gt; 4042

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 Asp His Arg Gln Glu Leu Ile Glu Cys Val Ala Asn Ser Asp Glu Gln  
 35 40 45  
 Leu Gly Glu Met Phe Leu Glu Glu Lys Ile Pro Ser Ile Ser Asp Leu  
 50 55 60  
 Lys Leu Ala Ile Arg Arg Ala Thr Leu Lys Arg Ser Phe Thr Pro Val  
 65 70 75 80  
 Phe Leu Gly Ser Ala Leu Lys Asn Lys Gly Val Gln Pro Leu Leu Asp  
 85 90 95  
 Ala Val Leu Glu Tyr Leu Pro Asn Pro Ser Glu Val Gln Asn Tyr Ala  
 100 105 110  
 Ile Leu Asn Lys Glu Asp Asp Ser Lys Glu Lys Thr Lys Ile Leu Met  
 115 120 125  
 Asn Ser Ser Arg Asp Asn Ser His Pro Phe Val Gly Leu Ala Phe Lys  
 130 135 140  
 Leu Glu Val Gly Arg Phe Gly Gln Leu Thr Tyr Val Arg Ser Tyr Gln  
 145 150 155 160  
 Gly Glu Leu Lys Lys Gly Asp Thr Ile Tyr Asn Thr Arg Thr Arg Lys  
 165 170 175  
 Lys Val Arg Leu Gln Arg Leu Ala Arg Met His Ala Asp Met Met  
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&lt;210&gt; 4043

&lt;211&gt; 744

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 4043

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 240  
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<210> 4040  
<211> 100  
<212> PRT  
<213> Homo sapiens

<400> 4040  
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20 25 30  
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35 40 45  
Ala Phe Pro Pro Leu Gly Pro Ala Pro Leu Ala Ala Pro Ala Arg Ser  
50 55 60  
Cys Asp Glu Ser Gly Pro Arg Gln Pro Asp Gly Arg Gly Gly Pro Ser  
65 70 75 80  
Trp Pro Thr Ala Ala Arg Arg Trp Ser Glu Pro Cys Ala Ala Ala Pro  
85 90 95  
Arg Arg Pro Trp  
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<210> 4041  
<211> 573  
<212> DNA  
<213> Homo sapiens

<400> 4041  
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420  
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480  
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<210> 4042  
<211> 191  
<212> PRT

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 4039

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240  
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&lt;210&gt; 4038

&lt;211&gt; 134

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 4038

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 Leu Arg Pro Cys Ile Gln Leu Ser Ser Lys Asn Glu Ala Ser Gly Met  
 35 40 45  
 Val Ala Pro Ala Val Gln Glu Lys Lys Val Lys Lys Arg Val Ser Phe  
 50 55 60  
 Ala Asp Asn Gln Gly Leu Ala Leu Thr Met Val Lys Val Phe Ser Glu  
 65 70 75 80  
 Phe Asp Asp Pro Leu Asp Met Pro Phe Asn Ile Thr Glu Leu Leu Asp  
 85 90 95  
 Asn Ile Val Ser Leu Thr Thr Ala Glu Ser Glu Ser Phe Val Leu Asp  
 100 105 110  
 Phe Ser Gln Pro Ser Ala Asp Tyr Leu Asp Phe Arg Asn Arg Leu Gln  
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 Ala Asp His Val Cys Leu  
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&lt;210&gt; 4039

&lt;211&gt; 1503

<400> 4037

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Pro Asp Gly Gln Glu Glu Ser Ile Phe Pro Asp Gly Thr Ile Val Arg
          340          345          350
Val Gln Arg Asp Gly Asn Lys Leu Ile Glu Phe Asn Asn Gly Gln Arg
          355          360          365
Glu Leu His Thr Ala Gln Phe Lys Arg Arg Glu Tyr Pro Asp Gly Thr
          370          375          380
Val Lys Thr Val Tyr Ala Asn Gly His Gln Glu Thr Lys Tyr Arg Ser
385          390          395          400
Gly Arg Ile Arg Val Lys Asp Lys Glu Gly Asn Val Leu Met Asp Thr
          405          410          415
Glu Leu

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&lt;210&gt; 4033

&lt;211&gt; 487

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 4033

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240
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420
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480
ccagtcc
487

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&lt;210&gt; 4034

&lt;211&gt; 94

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 4034

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Met Asn Thr Gly Ile Phe Pro Gly Trp Leu Leu Thr Ala Glu Gln Arg
 1          5          10          15
Lys Ser Ile Leu Gly Ala Cys Tyr Gly Gly Ser Phe Ile Gln Phe Thr
          20          25          30
Thr Ser Thr Ala Gly Pro Gln Trp Leu Pro Phe Ser Pro Thr Arg Ala
          35          40          45
Leu Gly Gln Ala Ser Ser Ala Pro Val Gly Arg Leu Pro Arg Lys Thr

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 1380  
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 1406

<210> 4032

<211> 418

<212> PRT

<213> Homo sapiens

<400> 4032

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		20					25					30			
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Arg	Thr	Phe	Pro	Asp	Lys	Lys	Glu	Arg	Glu	Glu	Ile	Gln	Thr	Leu	Lys
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Gln	Gln	Ile	Ala	Asp	Leu	Arg	Glu	Asp	Leu	Lys	Arg	Lys	Glu	Thr	Lys
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Trp	Ser	Ser	Thr	His	Ser	Arg	Leu	Arg	Ser	Gln	Ile	Gln	Met	Leu	Val
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Arg	Glu	Asn	Thr	Asp	Leu	Arg	Glu	Ile	Lys	Val	Met	Glu	Arg	Phe	
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Leu	Pro	Met	Gln	Gly	Asn	Pro	Pro	Arg	Arg	Ser	Lys	Ser	Ala	Pro	Pro
		180						185					190		
Arg	Asp	Leu	Gly	Asn	Leu	Asp	Lys	Gly	Gln	Ala	Ala	Ser	Pro	Arg	Glu
	195					200						205			
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	210					215					220				
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Glu	Lys	Val	Tyr	Lys	Asn	Gly	Cys	Arg	Val	Ile	Leu	Phe	Pro	Asn	Gly
			245					250						255	
Thr	Arg	Lys	Glu	Val	Ser	Ala	Asp	Gly	Lys	Thr	Ile	Thr	Val	Thr	Phe
			260					265					270		
Phe	Asn	Gly	Asp	Val	Lys	Gln	Val	Met	Pro	Asp	Gln	Arg	Val	Ile	Tyr
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Glu	Val	Leu	His	Phe	Ser	Ser	Gly	Gln	Ile	Glu	Lys	His	Tyr	Pro	Asp

	115		120		125	
Pro	Xaa	Pro	Pro	Ala	Leu	Ser
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&lt;210&gt; 4031

&lt;211&gt; 1406

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 4031

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&lt;210&gt; 4030

&lt;211&gt; 169

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 4030

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<211> 236

<212> PRT

<213> Homo sapiens

<400> 4028

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			20					25					30		
Lys	Glu	Leu	Met	Val	His	Val	Gly	Gly	Leu	Ile	Gln	Met	Gly	Cys	Val
		35					40					45			
Phe	Gln	Ser	Thr	Glu	Val	Lys	His	Val	Thr	Lys	Val	Glu	Trp	Ile	Phe
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Ser	Gly	Arg	Arg	Ala	Lys	Glu	Glu	Ile	Val	Phe	Arg	Tyr	Tyr	His	Lys
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Leu	Arg	Met	Ser	Ala	Glu	Tyr	Ser	Gln	Ser	Trp	Gly	His	Phe	Gln	Asn
				85					90					95	
Arg	Val	Asn	Leu	Val	Gly	Asp	Ile	Phe	Arg	Asn	Asp	Gly	Ser	Ile	Met
		100						105					110		
Leu	Gln	Gly	Val	Arg	Glu	Ser	Asp	Gly	Gly	Asn	Tyr	Thr	Cys	Ser	Ile
		115					120					125			
His	Leu	Gly	Asn	Leu	Val	Phe	Lys	Lys	Thr	Ile	Val	Leu	His	Val	Ser
		130					135					140			
Pro	Glu	Glu	Pro	Arg	Thr	Leu	Val	Thr	Pro	Ala	Ala	Leu	Arg	Pro	Leu
145					150					155				160	
Val	Leu	Gly	Gly	Asn	Gln	Leu	Val	Ile	Ile	Val	Gly	Ile	Val	Cys	Ala
				165					170					175	
Thr	Ile	Leu	Leu	Leu	Pro	Val	Leu	Ile	Leu	Ile	Val	Lys	Lys	Thr	Cys
			180					185					190		
Gly	Asn	Lys	Ser	Ser	Val	Asn	Ser	Thr	Val	Leu	Val	Lys	Asn	Thr	Lys
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Lys	Thr	Asn	Pro	Glu	Met	Lys	Glu	Lys	Pro	Cys	His	Phe	Glu	Arg	Cys
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<211> 909

<212> DNA

<213> Homo sapiens

<400> 4029

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<210> 4027
<211> 941
<212> DNA
<213> Homo sapiens
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 360  
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&lt;210&gt; 4026

&lt;211&gt; 302

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 4026

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 Thr Gly Glu Lys Pro Tyr Glu Cys Asn Gln Cys Phe His Val Phe Arg  
 35 40 45  
 Thr Ser Cys Asn Leu Lys Ser His Lys Arg Ile His Thr Gly Glu Asn  
 50 55 60  
 His His Glu Cys Asn Gln Cys Gly Lys Ala Phe Ser Thr Arg Ser Ser  
 65 70 75 80  
 Leu Thr Gly His Asn Cys Ile His Thr Gly Glu Lys Pro Tyr Glu Cys  
 85 90 95  
 Lys Glu Cys Gly Lys Thr Phe Met Tyr Asn Ser Ser Leu Ile Gln His

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Arg Val Ala Lys Glu Leu Asp Pro Arg Tyr Glu Asp Tyr Val Asp Gln		
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His Tyr Lys Glu Phe Leu Lys Asn Gln Gly Lys Val Asp Ser Leu Val		
1330	1335	1340
Gly Val Asp Val Ile Ala Ala Leu Asp Leu Tyr Val Glu Gln Gly Gln		
1345	1350	1355
Trp Asp Lys Cys Ile Glu Thr Ala Thr Lys Gln Asn Tyr Lys Ile Leu		
1365	1370	1375
His Lys Tyr Val Ala Leu Tyr Ala Thr His Leu Ile Arg Glu Gly Ser		
1380	1385	1390
Ser Ala Gln Ala Leu Ala Leu Tyr Val Gln His Gly Ala Pro Ala Asn		
1395	1400	1405
Pro Gln Asn Phe Asn Ile Tyr Lys Arg Ile Phe Thr Asp Met Val Ser		
1410	1415	1420
Ser Pro Gly Thr Asn Cys Ala Glu Ala Tyr His Ser Trp Ala Asp Leu		
1425	1430	1435
Arg Asp Val Leu Phe Asn Leu Ala Val Leu Ser Pro Ser Ser Ser Val		
1445	1450	1455
Lys Thr Trp Lys Ser Ser Glu Ala Asn Ser Pro Ala His Glu Glu Phe		
1460	1465	1470
Lys Thr Met Leu Leu Ile Ala His Tyr Tyr Ala Thr Arg Ser Ala Ala		
1475	1480	1485
Gln Ser Val Lys Gln Leu Glu Thr Val Ala Ala Arg Leu Ser Val Ser		
1490	1495	1500
Leu Leu Arg His Thr Gln Leu Leu Pro Val Asp Lys Ala Phe Tyr Glu		
1505	1510	1515
Ala Gly Ile Ala Ala Lys Ala Val Gly Trp Asp Asn Met Ala Phe Ile		
1525	1530	1535
Phe Leu Asn Arg Phe Leu Asp Leu Thr Asp Ala Ile Glu Glu Gly Thr		
1540	1545	1550
Leu Asp Gly Leu Asp His Ser Asp Phe Gln Asp Thr Asp Ile Pro Phe		
1555	1560	1565
Glu Val Pro Leu Pro Ala Lys Gln His Val Pro Glu Ala Glu Arg Glu		
1570	1575	1580
Glu Val Arg Asp Trp Val Leu Thr Val Ser Met Asp Gln Arg Leu Glu		
1585	1590	1595
Gln Val Leu Pro Arg Asp Glu Arg Gly Ala Tyr Glu Ala Ser Leu Val		
1605	1610	1615
Ala Ala Ser Thr Gly Val Arg Ala Leu Pro Cys Leu Ile Thr Gly Tyr		
1620	1625	1630
Pro Ile Leu Arg Asn Lys Ile Glu Phe Lys Arg Pro Gly Lys Ala Ala		
1635	1640	1645
Asn Lys Asp Asn Trp Asn Lys Phe Leu Met Ala Ile Lys Thr Ser His		
1650	1655	1660
Ser Pro Val Cys Gln Asp Val Leu Lys Phe Ile Ser Gln Trp Cys Gly		
1665	1670	1675
Gly Leu Pro Ser Thr Ser Phe Ser Phe Gln		
1685	1690	

&lt;210&gt; 4025

&lt;211&gt; 908

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

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	900			905		910
Gln Glu Met Glu Lys Gln Gly Lys Tyr Arg Glu Ala Glu Arg Leu Tyr						
	915			920		925
Val Thr Val Gln Glu Pro Asp Leu Ala Ile Thr Met Tyr Lys Lys His						
	930			935		940
Lys Leu Tyr Asp Asp Met Ile Arg Leu Val Gly Lys His His Pro Asp						
	945			950		955
Leu Leu Ser Asp Thr His Leu His Leu Gly Lys Glu Leu Glu Ala Glu						
	965			970		975
Gly Arg Leu Gln Glu Ala Glu Tyr His Tyr Leu Glu Ala Gln Glu Trp						
	980			985		990
Lys Ala Thr Val Asn Met Tyr Arg Ala Ser Gly Leu Trp Glu Glu Ala						
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Tyr Arg Val Ala Arg Thr Gln Gly Gly Ala Asn Ala His Lys His Val						
	1010			1015		1020
Ala Tyr Leu Trp Ala Lys Ser Leu Gly Gly Glu Ala Ala Val Arg Leu						
	1025			1030		1035
Leu Asn Lys Leu Gly Leu Leu Glu Ala Ala Val Asp His Ala Ala Asp						
	1045			1050		1055
Asn Cys Ser Phe Glu Phe Ala Phe Glu Leu Ser Arg Leu Ala Leu Lys						
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His Lys Thr Pro Glu Val His Leu Lys Tyr Ala Met Phe Leu Glu Asp						
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Glu Gly Lys Phe Glu Glu Ala Glu Ala Glu Phe Ile Arg Ala Gly Lys						
	1090			1095		1100
Pro Lys Glu Ala Val Leu Met Phe Val His Asn Gln Asp Trp Glu Ala						
	1105			1110		1115
Ala Gln Arg Val Ala Glu Ala His Asp Pro Asp Ser Val Ala Glu Val						
	1125			1130		1135
Leu Val Gly Gln Ala Arg Gly Ala Leu Glu Glu Lys Asp Phe Gln Lys						
	1140			1145		1150
Ala Glu Gly Leu Leu Leu Arg Ala Gln Arg Pro Gly Leu Ala Leu Asn						
	1155			1160		1165
Tyr Tyr Lys Glu Ala Gly Leu Trp Ser Asp Ala Leu Arg Ile Cys Lys						
	1170			1175		1180
Asp Tyr Val Pro Ser Gln Leu Glu Ala Leu Gln Glu Glu Tyr Glu Arg						
	1185			1190		1195
Glu Ala Thr Lys Lys Gly Ala Arg Gly Val Glu Gly Phe Val Glu Gln						
	1205			1210		1215
Ala Arg His Trp Glu Gln Ala Gly Glu Tyr Ser Arg Ala Val Asp Cys						
	1220			1225		1230
Tyr Leu Lys Val Arg Asp Ser Gly Asn Ser Gly Leu Ala Glu Lys Cys						
	1235			1240		1245
Trp Met Lys Ala Ala Glu Leu Ser Ile Lys Phe Leu Pro Pro Gln Arg						
	1250			1255		1260
Asn Met Glu Val Val Leu Ala Val Gly Pro Gln Leu Ile Gly Ile Gly						
	1265			1270		1275
Lys His Ser Ala Ala Ala Glu Leu Tyr Leu Asn Leu Asp Leu Val Lys						
	1285			1290		1295
Glu Ala Ile Asp Ala Phe Ile Glu Gly Glu Glu Trp Asn Lys Ala Lys						

3208

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Val	Thr	Cys	Leu	Gln	Trp	Pro	Ala	Glu	Tyr	Ile	Ile	Val	Phe	Gly	Leu
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Asn	His	Pro	Cys	Pro	Pro	Tyr	Ala	Leu	Ala	Trp	Ala	Thr	Asn	Ser	Ile
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Phe	Thr	Thr	Ala	Val	Ser	Ser	Pro	Gly	Gly	Gln	Ser	Val	Val	Leu	Gly
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Ser	Tyr	Asp	Arg	Leu	Arg	Val	Phe	Asn	Trp	Ile	Pro	Arg	Arg	Ser	Ile
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Trp	Glu	Glu	Ala	Lys	Pro	Lys	Glu	Ile	Thr	Asn	Leu	Tyr	Thr	Ile	Thr
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Lys	Asn	Lys	Phe	Glu	Leu	Thr	Tyr	Val	Gly	Pro	Ser	Gln	Val	Ile	Val
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Ser	His	Glu	Ser	Arg	Val	Asp	Trp	Leu	Glu	Leu	Asn	Glu	Thr	Gly	His
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Lys	Leu	Leu	Phe	Arg	Asp	Arg	Lys	Leu	Arg	Leu	His	Leu	Tyr	Asp	Ile



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&lt;210&gt; 4024

&lt;211&gt; 1690

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 4024

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&lt;211&gt; 5193

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 4023

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&lt;211&gt; 4209

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 4021

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&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 4020

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		20					25					30			
Leu	Val	Cys	Gly	Leu	Leu	Leu	Val	Ile	Ala	Leu	Gly	Cys	Thr	Cys	Lys
		35				40					45				
Leu	Tyr	Ala	Ile	Arg	Thr	Gln	Glu	Tyr	Ser	Ile	Phe	Ala	Pro	Leu	Ser
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Arg	Met	Glu	Ala	Glu	Ile	Val	Gln	Gln	Gln	Ala	Pro	Pro	Ser	Tyr	Gly

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 <211> 2408  
 <212> DNA  
 <213> Homo sapiens

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Ala	Met	His	Gly	Asp	Ser	His	Asp	Arg	Tyr	Glu	Arg	Leu	Thr	Phe	Val		
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Ser	Ser	Ser	Val	Asp	Phe	Asp	Gln	Arg	Asp	Asn	Gly	Phe	Cys	Ser	Trp		
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115			120					125									
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Lys	Lys	His	Phe	Glu	Glu	Ala	Tyr	Pro	Asn	Cys	Thr	Val	Leu	Glu	Ala		
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Arg	Pro	Cys	Tyr	Asn	Val	Ala	Arg	Leu	Met	Phe	Leu	Asp	Ala	Glu	Arg		
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Lys	Lys	Ala	Glu	Arg	Gly	Lys	Leu	Tyr	Phe	Thr	Asn	Leu	Gln	Ser	Lys		
275			280					285									
Glu	Asn	Val	Pro	Thr	Met	Ile	Asn	Pro	Lys	Pro	Cys	Gly	His	Phe	Cys		
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Cys	Cys	Val	Val	Arg	Gly	Cys	Glu	Gln	Val	Glu	Ala	Ile	Glu	Tyr	Tyr		
305	310					315					320						
Thr	Lys	Leu	Glu	Gln	Lys	Leu	Lys	Glu	Asp	Tyr	Lys	Arg	Glu	Lys	Gly		
325			330					335									
Lys	Val	Asn	Glu	Lys	Pro	Leu	Gly	Met	Ala	Phe	Val	Thr	Phe	His	Asn		
340			345					350									
Glu	Thr	Ile	Thr	Ala	Ile	Ile	Leu	Lys	Asp	Phe	Asn	Val	Cys	Lys	Cys		
355			360					365									
Gln	Gly	Cys	Thr	Cys	Arg	Gly	Glu	Pro	Arg	Pro	Ser	Cys	Ser	Glu			
370			375					380									
Ser	Leu	His	Ile	Pro	Asn	Trp	Thr	Gly	Ser	Tyr	Ala	Pro	Asp	Pro	Gln		
385	390					395					400						
Asn	Ile	Tyr	Trp	Glu	His	Leu	Ser	Ile	Arg	Gly	Phe	Ile	Trp	Trp	Leu		
405			410					415									
Arg	Cys	Leu	Val	Ile	Asn	Val	Val	Leu	Phe	Ile	Leu	Leu	Phe	Phe	Leu		
420			425					430									
Thr	Thr	Pro	Ala	Ile	Ile	Ile	Thr	Thr	Met	Asp	Lys	Phe	Asn	Val	Thr		
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Lys	Pro	Val	Glu	Tyr	Leu	Asn	Asn	Pro	Ile	Ile	Thr	Gln	Phe	Phe	Pro		

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&lt;210&gt; 4018

&lt;211&gt; 480

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 4018

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 Leu Gln Gly Leu Pro Phe Gly Gly Val Pro Thr Val Leu Ala Leu Asp

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 420  
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 480  
 gcttctgggc tctaacctgg gagactcgca tccagcccg gcgaagctac agtctctacc  
 540  
 ctgagctccg tggcgagag cgctccacgc gtattcacgc cccgctcctc gcctgcaccc  
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 660  
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 720  
 ccgtcggcat gcctggaggc cgggtcccg atgtcgtgg gggccctacc ccctcgtgcg  
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 <211> 95  
 <212> PRT  
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<400> 4016  
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 Asn Arg Arg Met Lys Trp Lys Lys Ile Val Leu Gln Gly Gly Gly Leu  
 35 40 45  
 Glu Ser Pro Thr Lys Pro Lys Gly Arg Pro Lys Lys Asn Ser Ile Pro  
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 Pro Ala Glu Val Pro Gly Glu Pro Ser Asp Arg Ser Arg Glu Asp  
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<210> 4017  
 <211> 1521  
 <212> DNA  
 <213> Homo sapiens

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 120  
 agcaccgtcc tacagggcct gccctttggg ggcgtcccca ccgtgctggc cttggacttc  
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 acgtgcttcc tcgccctgct gttcttattc tccatcctcc ggaaggtggc ctgggactat  
 240

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Ile Gly Asp Lys Ser Cys Ser Ser His Ser Ser Ser Asn Thr Leu Ser
      180      185      190
Ser Asn Thr Ser Ser Asn Ser Asp Asp Lys His Phe Gly Ser Gly Asp
      195      200      205
Leu Met Asp Pro Glu Leu Leu Gly Leu Thr Tyr Ile Lys Gly Ala Ser
      210      215      220
Thr Asp Ser Gly Ile Asp Thr Ala Pro Cys Met Pro Ala Thr Ile Leu
      225      230      235      240
Gly Pro Val His Leu Ala Gly Ser Arg Ser Leu Ile His Ser Arg Ala
      245      250      255
Glu Gln Trp Ala Asp Ala Ala Asp Val Ser Gly Pro Asp Asp Glu Pro
      260      265      270
Ala Lys Leu Tyr Ser Val His Gly Tyr Ala Ser Thr Ile Ser Ala Gly
      275      280      285
Ser Ala Ala Glu Gly Ser Met Gly Asp Leu Ser Glu Ile Ser Ser His
      290      295      300
Ser Ser Gly Ser His His Ser Gly Ser Pro Ser Ala His Cys Ser Lys
      305      310      315      320
Ser Ser Gly Ser Leu Asp Ser Ser Lys Val Tyr Ile Val Ser His Ser
      325      330      335
Ser Gly Gln Gln Val Pro Gly Ser Met Ser Lys Pro Tyr His Arg Gln
      340      345      350
Gly Ala Val Asn Lys Tyr Val Ile Gly Trp Lys Lys Ser Glu Gly Ser
      355      360      365
Pro Pro Pro Glu Glu Pro Glu Val Thr Glu Cys Pro Gly Met Tyr Ser
      370      375      380
Glu Leu Asp Val Met Ser Thr Ala Thr Gln His Gln Thr Val Val Gly
      385      390      395      400
Asp Ala Val Ala Glu Thr Gln His Val Leu Ser Lys Glu Asp Phe Leu
      405      410      415
Lys Leu Met Leu Pro Asp Ser Pro Leu Val Glu Glu Gly Arg Arg Lys
      420      425      430
Phe Ser Phe Tyr Gly Asn Leu Ser Pro Arg Arg Ser Leu Tyr Arg Thr
      435      440      445
Leu Ser Asp Glu Ser Ile Cys Ser Asn Arg Arg Gly Ser Ser Phe Gly
      450      455      460
Ser Ser Arg Ser Ser Val Leu Asp Gln
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&lt;210&gt; 4015

&lt;211&gt; 823

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 4015

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240

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<210> 4014

<211> 473

<212> PRT

<213> Homo sapiens

<400> 4014

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		20						25					30		
Thr	Pro	Ala	Leu	Gln	Pro	Leu	Ser	Arg	Ala	Ser	Pro	Ile	Pro	Gly	Thr
		35					40					45			
Pro	Asp	Arg	Leu	Pro	Cys	Gln	Gln	Leu	Leu	Gln	Gln	Ala	Gln	Ala	Ala
	50					55				60					
Ile	Pro	Arg	Ser	Thr	Ser	Phe	Asp	Arg	Lys	Leu	Pro	Asp	Gly	Thr	Arg
65				70					75					80	
Ser	Ser	Pro	Ser	Asn	Gln	Ser	Ser	Ser	Ser	Asp	Pro	Gly	Pro	Gly	Gly
			85					90					95		
Ser	Gly	Pro	Trp	Arg	Pro	Gln	Val	Gly	Tyr	Asp	Gly	Cys	Gln	Ser	Pro
		100					105						110		
Leu	Leu	Leu	Glu	His	Gln	Gly	Ser	Gly	Pro	Leu	Glu	Cys	Asp	Gly	Ala
		115					120					125			
Arg	Glu	Arg	Glu	Asp	Thr	Met	Glu	Ala	Ser	Arg	His	Pro	Glu	Thr	Lys
	130					135					140				
Trp	His	Gly	Pro	Pro	Ser	Lys	Val	Leu	Gly	Ser	Tyr	Lys	Glu	Arg	Ala
145					150					155				160	
Leu	Gln	Lys	Asp	Gly	Ser	Cys	Lys	Asp	Ser	Pro	Asn	Lys	Leu	Ser	His



225                      230                      235                      240  
 Phe. Ala Ile Gly Gly Leu Ser Gly Gly Glu Ser Lys Ser Gln Phe Trp  
                                  245                      250                      255  
 Arg Met Val Ala Leu Ser Thr Ser Arg Leu Pro Lys Asp Lys Pro Arg  
                                  260                      265                      270  
 Tyr Leu Met Gly Val Gly Tyr Ala Thr Asp Leu Val Val Cys Val Ala  
                                  275                      280                      285  
 Leu Gly Cys Asp Met Phe Asp Cys Val Phe Pro Thr Arg Thr Ala Arg  
                                  290                      295                      300  
 Phe Gly Ser Ala Leu Val Pro Thr Gly Asn Leu Gln Leu Arg Lys Lys  
 305                      310                      315                      320  
 Val Phe Glu Lys Asp Phe Gly Pro Ile Asp Pro Glu Cys Thr Cys Pro  
                                  325                      330                      335  
 Thr Cys Gln Lys His Ser Arg Ala Phe Leu His Ala Leu Leu His Ser  
                                  340                      345                      350  
 Asp Asn Thr Ala Ala Leu His His Leu Thr Val His Asn Ile Ala Tyr  
                                  355                      360                      365  
 Gln Leu Gln Leu Met Ser Ala Val Arg Thr Ser Ile Val Glu Lys Arg  
                                  370                      375                      380  
 Phe Pro Asp Phe Val Arg Asp Phe Met Gly Ala Met Tyr Gly Asp Pro  
 385                      390                      395                      400  
 Thr Leu Cys Pro Thr Trp Ala Thr Asp Ala Leu Ala Ser Val Gly Ile  
                                  405                      410                      415  
 Thr Leu Gly

&lt;210&gt; 4013

&lt;211&gt; 1419

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 4013

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<210> 4012

<211> 419

<212> PRT

<213> Homo sapiens

<400> 4012

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			20					25					30		
Ser	Arg	Ser	Arg	Ala	Arg	Ala	Gly	Glu	Leu	Trp	Leu	Pro	His	Gly	Thr
			35				40					45			
Val	Ala	Thr	Pro	Val	Phe	Met	Pro	Val	Gly	Thr	Gln	Ala	Thr	Met	Lys
			50			55				60					
Gly	Ile	Thr	Thr	Glu	Gln	Leu	Asp	Ala	Leu	Gly	Cys	Arg	Ile	Cys	Leu
65					70					75				80	
Gly	Asn	Thr	Tyr	His	Leu	Gly	Leu	Arg	Pro	Gly	Pro	Glu	Leu	Ile	Gln
				85				90						95	
Lys	Ala	Asn	Gly	Leu	His	Gly	Phe	Met	Asn	Trp	Pro	His	Asn	Leu	Leu
			100					105					110		
Thr	Leu	Cys	Gly	Gly	Val	Ser	Leu	Asp	Ser	Gly	Gly	Phe	Gln	Met	Val
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Ser	Leu	Val	Ser	Leu	Ser	Glu	Val	Thr	Glu	Glu	Gly	Val	Arg	Phe	Arg
			130				135					140			
Ser	Pro	Tyr	Asp	Gly	Asn	Glu	Thr	Leu	Leu	Ser	Pro	Glu	Lys	Ser	Val
145					150					155				160	
Gln	Ile	Gln	Asn	Ala	Leu	Gly	Ser	Asp	Ile	Ile	Met	Gln	Leu	Asp	Asp
				165				170						175	
Val	Val	Ser	Ser	Thr	Val	Thr	Gly	Pro	Arg	Val	Glu	Glu	Ala	Met	Tyr
				180				185					190		
Arg	Ser	Ile	Arg	Trp	Leu	Asp	Arg	Cys	Ile	Ala	Ala	His	Gln	Arg	Pro
				195			200					205			
Asp	Lys	Gln	Asn	Leu	Phe	Ala	Ile	Ile	Gln	Gly	Gly	Leu	Asp	Ala	Asp
			210				215					220			
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<210> 4011
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<212> DNA
<213> Homo sapiens
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 Tyr Asp  
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<210> 4009  
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 <213> Homo sapiens

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 240  
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 <211> 225  
 <212> PRT  
 <213> Homo sapiens

<400> 4010  
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 Met Gln Ala Ser Val Pro Gly Pro Ser Glu Glu Pro Val Val Tyr Asn  
 35 40 45  
 Pro Thr Thr Ala Ala Phe Ile Cys Asp Ser Leu Val Asn Glu Lys Thr  
 50 55 60  
 Ile Gly Ser Pro Pro Asn Glu Phe Tyr Cys Ser Glu Asn Thr Ser Val  
 65 70 75 80  
 Pro Asn Glu Ser Asn Lys Ile Leu Val Asn Lys Asp Val Pro Gln Lys

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 2040  
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 2160  
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<210> 4008

<211> 290

<212> PRT

<213> Homo sapiens

<400> 4008

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			20					25					30		
Ser	Glu	Ala	Ser	Lys	Glu	Asn	Arg	Asp	Ile	Glu	Ile	Ser	Thr	Glu	Glu
			35				40					45			
Glu	Lys	Asp	Thr	Gly	Asp	Leu	Lys	Asp	Ser	Ser	Leu	Leu	Lys	Thr	Lys
			50			55					60				
Arg	Lys	His	Lys	Lys	Lys	His	Lys	Glu	Arg	His	Lys	Met	Gly	Glu	Glu
65						70				75					80
Val	Ile	Pro	Leu	Arg	Val	Leu	Ser	Lys	Ser	Glu	Trp	Met	Asp	Leu	Lys
						85				90				95	
Lys	Glu	Tyr	Leu	Ala	Leu	Gln	Lys	Ala	Ser	Met	Ala	Ser	Leu	Lys	Lys
			100					105					110		
Thr	Ile	Ser	Gln	Ile	Lys	Ser	Glu	Ser	Glu	Met	Glu	Thr	Asp	Ser	Gly
			115				120					125			
Val	Pro	Gln	Asn	Thr	Gly	Met	Lys	Asn	Glu	Lys	Thr	Ala	Asn	Arg	Glu
			130				135					140			
Glu	Cys	Arg	Thr	Gln	Glu	Lys	Val	Asn	Ala	Thr	Gly	Pro	Gln	Phe	Val
145						150				155					160
Ser	Gly	Val	Ile	Val	Lys	Ile	Ile	Ser	Thr	Glu	Pro	Leu	Pro	Gly	Arg
						165				170				175	
Lys	Gln	Val	Arg	Asp	Thr	Leu	Ala	Ala	Ile	Ser	Glu	Val	Leu	Tyr	Val
						180				185				190	
Asp	Leu	Leu	Glu	Gly	Asp	Thr	Glu	Cys	His	Ala	Arg	Phe	Lys	Thr	Pro
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Glu	Asp	Ala	Gln	Ala	Val	Ile	Asn	Ala	Tyr	Thr	Glu	Ile	Asn	Lys	Lys
			210				215					220			
His	Cys	Trp	Lys	Leu	Glu	Ile	Leu	Ser	Gly	Asp	His	Glu	Gln	Arg	Tyr
225						230				235					240
Trp	Gln	Lys	Ile	Leu	Val	Asp	Arg	Gln	Ala	Lys	Leu	Asn	Gln	Pro	Arg
						245				250				255	
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<210> 4006  
<211> 222  
<212> PRT  
<213> Homo sapiens

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Met Met Lys Ala Ala Ile Ser Glu Thr Glu Asp Met Pro Met Phe Glu  
35 40 45  
Pro Lys Met Thr Arg Ser Lys Leu Lys Glu Val Val Glu Lys Gly Met  
50 55 60  
Val Ile Pro Thr Trp Asn Ile Ser Pro Ile Lys Lys Ala Asn Glu Ile  
65 70 75 80  
Lys Pro Pro Gln Phe Val Asp Ile His Leu Glu Glu Asp Asp Ser Ser  
85 90 95  
Asp Glu Glu Tyr Gln Pro Asp Asp Glu Glu Glu Asp Glu Thr Ala Glu  
100 105 110  
Glu Ser Leu Leu Glu Ser Asp Val Glu Ser Thr Ala Ser Ser Pro Arg  
115 120 125  
Gly Ala Lys Lys Ser Arg Leu Arg Gln Ser Ser Glu Met Thr Glu Thr  
130 135 140  
Asp Glu Glu Ser Gly Ile Leu Ser Glu Ala Glu Lys Val Thr Thr Pro  
145 150 155 160  
Ala Ile Arg His Ile Ser Ala Glu Val Val Pro Met Gly Pro Pro Pro  
165 170 175  
Pro Pro Lys Pro Lys Gln Thr Arg Asp Ser Thr Phe Met Glu Lys Leu  
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195 200 205  
Phe Gln Pro Met Asp Asp Ser Leu Ile Ala Phe Arg Thr Arg  
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<210> 4007  
<211> 2313  
<212> DNA  
<213> Homo sapiens

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<211> 160  
 <212> PRT  
 <213> Homo sapiens

<400> 4004  
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 35 40 45  
 Ala Lys Pro Pro Val Ser Phe Phe Ser Leu Arg Ser Pro Val Leu Asp  
 50 55 60  
 Leu Phe Gln Gly Gln Leu Asp Tyr Ala Glu Tyr Val Arg Arg Asp Ser  
 65 70 75 80  
 Glu Val Val Leu Leu Phe Phe Tyr Ala Pro Trp Cys Gly Gln Ser Ile  
 85 90 95  
 Ala Ala Arg Ala Glu Ile Glu Gln Ala Ala Ser Arg Leu Ser Asp Gln  
 100 105 110  
 Val Leu Phe Val Ala Ile Asn Cys Trp Trp Asn Gln Gly Lys Cys Arg  
 115 120 125  
 Lys Gln Lys His Phe Phe Tyr Phe Pro Val Ile Tyr Leu Tyr His Arg  
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 145 150 155 160

<210> 4005  
 <211> 666  
 <212> DNA  
 <213> Homo sapiens

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 300  
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225                      230                      235                      240  
 Ile Leu Gln Lys Phe Thr Ser Met His Lys Ala Tyr Ser Pro Glu Lys  
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 Lys Ile Ser Ile Leu Leu Lys Thr Cys Lys Leu Ile Tyr Asp Ser Met  
                                  260                      265                      270  
 Ala Leu Gly Asn Pro Gly Lys Pro Tyr Gly Ala Asp Asp Phe Leu Pro  
                                  275                      280                      285  
 Val Leu Met Tyr Val Leu Ala Arg Ser Asn Leu Thr Glu Met Leu Leu  
                                  290                      295                      300  
 Asn Val Glu Tyr Met Met Glu Leu Met Asp Pro Ala Leu Gln Leu Gly  
 305                                   310                      315                      320  
 Glu Gly Ser Tyr Tyr Leu Thr Thr Thr Tyr Gly Ala Leu Glu His Ile  
                                  325                      330                      335  
 Lys Ser Tyr Asp Lys Ile Thr Val Thr Arg Gln Leu Ser Val Glu Val  
                                  340                      345                      350  
 Gln Asp Ser Ile His Arg Trp Glu Arg Arg Arg Thr Leu Asn Lys Ala  
                                  355                      360                      365  
 Arg Ala Ser Arg Ser Ser Val Gln Asp Phe Ile Cys Val Ser Tyr Leu  
                                  370                      375                      380  
 Glu Pro Glu Gln Gln Ala Arg Thr Leu Ala Ser Arg Ala Asp Thr Gln  
 385                                   390                      395                      400  
 Ala Gln Ala Leu Cys Ala Gln Cys Ala Glu Lys Phe Ala Val Glu Arg  
                                  405                      410                      415  
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&lt;210&gt; 4003

&lt;211&gt; 581

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 4003

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 420  
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 480  
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 581

&lt;210&gt; 4004

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<210> 4002

<211> 417

<212> PRT

<213> Homo sapiens

<400> 4002

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			20				25					30			
Leu	Ser	Asp	Ser	Leu	Gly	Val	Ser	Val	Met	Ala	Thr	Asp	Gln	Asp	Ser
		35				40					45				
Tyr	Ser	Thr	Ser	Ser	Thr	Glu	Glu	Glu	Leu	Glu	Gln	Phe	Ser	Ser	Pro
	50				55			60							
Ser	Val	Lys	Lys	Lys	Pro	Ser	Met	Ile	Leu	Gly	Lys	Ala	Arg	His	Arg
65				70				75					80		
Leu	Ser	Phe	Ala	Ser	Phe	Ser	Ser	Met	Phe	His	Ala	Phe	Leu	Ser	Asn
			85					90					95		
Asn	Arg	Lys	Leu	Tyr	Lys	Lys	Val	Val	Glu	Leu	Ala	Gln	Asp	Lys	Gly
		100					105					110			
Ser	Tyr	Phe	Gly	Ser	Leu	Val	Gln	Asp	Tyr	Lys	Val	Tyr	Ser	Leu	Glu
		115				120					125				
Met	Met	Ala	Arg	Gln	Thr	Ser	Ser	Thr	Glu	Met	Leu	Gln	Glu	Ile	Arg
	130				135						140				
Thr	Met	Met	Thr	Gln	Leu	Lys	Ser	Tyr	Leu	Leu	Gln	Ser	Thr	Glu	Leu
145				150					155					160	
Lys	Ala	Leu	Val	Asp	Pro	Ala	Leu	His	Ser	Glu	Glu	Glu	Leu	Glu	Ala
			165					170					175		
Ile	Val	Glu	Ser	Ala	Leu	Tyr	Lys	Cys	Val	Leu	Lys	Pro	Leu	Lys	Glu
		180					185					190			
Ala	Ile	Asn	Ser	Cys	Leu	His	Gln	Ile	His	Ser	Lys	Asp	Gly	Ser	Leu
		195					200					205			
Gln	Gln	Leu	Lys	Glu	Asn	Gln	Leu	Val	Ile	Leu	Ala	Thr	Thr	Thr	Thr
	210					215					220				
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<210> 4001
<211> 1251
<212> DNA
<213> Homo sapiens
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3180

&lt;400&gt; 4000

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 20          25          30
Glu Glu Leu Cys Thr Pro Pro Asp Pro Gly Ala Ala Phe Val Val Val
 35          40          45
Glu Cys Pro Asp Glu Ser Phe Ile Gln Pro Ile Cys Glu Asn Ala Thr
 50          55          60
Phe Gln Arg Tyr Gln Gly Lys Ala Asp Ala Pro Val Ala Leu Val Val
 65          70          75          80
His Met Ala Pro Ala Ser Val Leu Val Asp Ser Arg Tyr Gln Gln Trp
 85          90          95
Met Glu Arg Phe Gly Pro Asp Thr Gln His Leu Val Leu Asn Glu Asn
100          105          110
Cys Ala Ser Val His Asn Leu Arg Ser His Lys Ile Gln Thr Gln Leu
115          120          125
Asn Leu Ile His Pro Asp Ile Phe Pro Leu Leu Thr Ser Phe Arg Cys
130          135          140
Lys Lys Glu Gly Pro Thr Leu Ser Val Pro Met Val Gln Gly Glu Cys
145          150          155          160
Leu Leu Lys Tyr Gln Leu Arg Pro Arg Arg Glu Trp Gln Arg Asp Ala
165          170          175
Ile Ile Thr Cys Asn Pro Glu Glu Phe Ile Val Glu Ala Leu Gln Leu
180          185          190
Pro Asn Phe Gln Gln Ser Val Gln Glu Tyr Arg Arg Ser Ala Gln Asp
195          200          205
Gly Pro Ala Pro Ala Glu Lys Arg Ser Gln Tyr Pro Glu Ile Ile Phe
210          215          220
Leu Gly Thr Gly Ser Ala Ile Pro Met Lys Ile Arg Asn Val Ser Ala
225          230          235          240
Thr Leu Val Asn Ile Ser Pro Asp Thr Ser Leu Leu Leu Asp Cys Gly
245          250          255
Glu Gly Thr Phe Gly Gln Leu Cys Arg His Tyr Gly Asp Gln Val Asp
260          265          270
Arg Val Leu Gly Thr Leu Ala Ala Val Phe Val Ser His Leu His Ala
275          280          285
Asp His His Thr Gly Leu Pro Ser Ile Leu Leu Gln Arg Glu Arg Ala
290          295          300
Leu Ala Ser Leu Gly Lys Pro Leu His Pro Leu Leu Val Val Ala Pro
305          310          315          320
Asn Gln Leu Lys Ala Trp Leu Gln Gln Tyr His Asn Gln Cys Gln Glu
325          330          335
Val Leu His His Ile Ser Met Ile Pro Ala Lys Cys Leu Gln Glu Gly
340          345          350
Ala Glu Ile Ser Ser Pro Ala Val Glu Arg Leu Ile Ser Ser Leu Leu
355          360          365
Arg Thr Cys Asp Leu Glu Glu Phe Gln Thr Cys Leu Val Arg His Cys
370          375          380
Lys His Ala Phe Gly Cys Ala Leu Val His Thr Ser Gly Trp Lys Val
385          390          395          400
Val Tyr Ser Gly Asp Thr Met Pro Cys Glu Ala Leu Val Arg Met Gly
405          410          415
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2820

	180		185		190										
Val	Pro	Leu	Glu	Ile	Pro	Glu	Phe	Asp	Leu	Leu	Asp	Gln	Asp	Ser	Leu
	195		200		205										
His	Glu	Ser	Gln	Glu	Gln	Thr	Leu	Met	Glu	Glu	Ala	Pro	Pro	Arg	Ala
	210		215		220										
Gln	His	Ser	Tyr	Lys	Tyr	Leu	Gly	Phe	Gly	Glu					
225			230		235										

&lt;210&gt; 3997

&lt;211&gt; 7484

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 3997

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720
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1200

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&lt;400&gt; 3995

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 120  
 cggacccagg ccattcggag acgccacaat gcaggcagca accccacccc tccagcctct  
 180  
 gtcattgggt cgccgccag cagcctgcag gaagctcagc ggggcccggc tgcctccac  
 240  
 tcccgggcgc tgacgtgcc ctctgcgtg catttcgctt cttcactgtt gctcaccgg  
 300  
 gccgtgcca atgtgcatga ggcctgcacc ttgatgaca cttctgaggg tgctgtgcac  
 360 atgagagcgg tgtgcggcgt tctacacct ttggcctggc tggaggcggc 420  
 tacgagaacc ctgtagggca gcaaggggag cagacagcta atggagcctg ggaccgacac  
 480  
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 715

&lt;210&gt; 3996

&lt;211&gt; 235

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 3996

Arg	Gly	Pro	Ala	Ala	Asn	Gln	Pro	Gly	Trp	Arg	Gly	Glu	Leu	Gln	Glu
1				5					10					15	
Glu	Gly	Ala	Val	Gly	Gly	Ala	Ala	Ala	Glu	Thr	Gly	Arg	Arg	Asp	Arg
			20					25					30		
Ser	Ser	Ser	Val	Arg	Arg	Thr	Gln	Ala	Ile	Arg	Arg	Arg	His	Asn	Ala
		35				40						45			
Gly	Ser	Asn	Pro	Thr	Pro	Pro	Ala	Ser	Val	Met	Gly	Ser	Pro	Pro	Ser
	50					55					60				
Ser	Leu	Gln	Glu	Ala	Gln	Arg	Gly	Arg	Ala	Ala	Ser	His	Ser	Arg	Ala
65					70				75					80	
Leu	Thr	Leu	Pro	Ser	Ala	Leu	His	Phe	Ala	Ser	Ser	Leu	Leu	Leu	Thr
				85					90					95	
Arg	Ala	Gly	Ala	Asn	Val	His	Glu	Ala	Cys	Thr	Phe	Asp	Asp	Thr	Ser
			100					105					110		
Glu	Gly	Ala	Val	His	Tyr	Phe	Tyr	Asp	Glu	Ser	Gly	Val	Arg	Arg	Ser
		115					120					125			
Tyr	Thr	Phe	Gly	Leu	Ala	Gly	Gly	Gly	Tyr	Glu	Asn	Pro	Val	Gly	Gln
	130					135					140				
Gln	Gly	Glu	Gln	Thr	Ala	Asn	Gly	Ala	Trp	Asp	Arg	His	Ser	His	Ser
145				150					155					160	
Ser	Ser	Phe	His	Ser	Ala	Asp	Val	Pro	Glu	Ala	Thr	Gly	Gly	Leu	Asn
			165					170						175	
Leu	Leu	Gln	Pro	Arg	Pro	Val	Val	Leu	Gln	Gly	Met	Gln	Val	Arg	Arg

```

      35          40          45
Pro  Gln  Cys  Val  Ser  Arg  Phe  Val  Arg  Pro  Pro  Pro  Ser  Ala  Pro  Glu
      50          55          60
Pro  Ala  Pro  Pro  Tyr  Leu  Asp  His  Tyr  Pro  Pro  Tyr  Leu  Gln  Glu  Arg
65          70          75          80
Val  Val  Asn  Ser  Gln  Tyr  Gly  Thr  Gln  Pro  Gln  Gln  Tyr  Pro  Pro  Ile
      85          90          95
Tyr  Pro  Ser  His  Tyr  Asp  Gly  Arg  Arg  Val  Tyr  Pro  Ala  Pro  Ser  Tyr
      100         105         110
Thr  Arg  Glu  Glu  Ile  Phe  Arg  Glu  Ser  Pro  Ile  Pro  Ile  Glu  Ile
      115         120         125

```

&lt;210&gt; 3993

&lt;211&gt; 394

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 3993

```

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gcggtcgcgt cccacaggct gccgagcgga gcgcgcacag agggggccaa cattaacaaa
120
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180
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240
cagctaaaga tgtagttgag gatgttttgt ttaaaggcag tacataagca ggcaaaagtc
300
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360
tgaggaaaat tgtgtggatt aaattgatct ccag
394

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&lt;210&gt; 3994

&lt;211&gt; 72

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 3994

```

Xaa  Ala  Trp  Gly  Arg  Thr  Arg  Glu  Ala  Ala  Ala  Ala  Ala  Gln  Arg  Asn
 1          5          10          15
Glu  Thr  Ser  Ala  Ala  Val  Ala  Ser  His  Arg  Leu  Pro  Ser  Gly  Ala  Arg
      20          25          30
Thr  Glu  Gly  Ala  Asn  Ile  Asn  Lys  Pro  Asp  Cys  Glu  Gly  Glu  Thr  Pro
      35          40          45
Ile  His  Lys  Ala  Ala  Arg  Ser  Gly  Ser  Leu  Glu  Cys  Ile  Ser  Ala  Leu
      50          55          60
Val  Ala  Asn  Gly  Ala  His  Val  Glu
65          70

```

&lt;210&gt; 3995

&lt;211&gt; 715

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

```

785          790          795          800
Glu Arg Glu Glu Ser Thr Thr Gly Phe Asp Lys Ser Arg Leu Gly Thr
          805          810          815
Lys Asp Phe Val Gly Pro Ser Glu Arg Gly Gly Arg Ala Arg Gly
          820          825          830
Thr Phe Gln Phe Arg Ala Arg Gly Arg Gly Trp Gly Arg Gly Asn Tyr
          835          840          845
Ser Gly Asn Asn Asn Asn Asn Ser Asn Asn Asp Phe Gln Lys Arg Asn
          850          855          860
Arg Glu Glu Glu Trp Asp Pro Glu Tyr Thr Pro Lys Ser Lys Lys Tyr
865          870          875          880
Tyr Leu His Asp Asp Arg Glu Gly Glu Gly Ser Asp Lys Trp Val Ser
          885          890          895
Arg Gly Arg Gly Arg Gly Ala Phe Pro Arg Gly Arg Gly Arg Phe Met
          900          905          910
Phe Arg Lys Ser Ser Thr Ser Pro Lys Trp Ala His Asp Lys Phe Ser
          915          920          925
Gly Glu Glu Gly Glu Ile Glu Asp Asp Glu Ser Gly Thr Glu Asn Arg
          930          935          940
Glu Glu Lys Asp Asn Ile Gln Pro Thr Thr Glu
945          950          955

```

&lt;210&gt; 3991

&lt;211&gt; 381

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 3991

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120
cagggtatgt attatactcc accaccacaa tgtgtgtccc gctttgtccg acctccacca
180
tctgtcctcg aacctgctcc tcctacttg gatcattatc caccctacct ccaagaacgt
240
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tatgatggcc gtcgagtgtg cctgtctccg tcttacacaa gagaagagat attccgagaa
360
agccctatac ccattgagat t
381

```

&lt;210&gt; 3992

&lt;211&gt; 127

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 3992

```

Xaa Tyr Gln Pro Leu Arg Met Val Pro Arg Gly Ser Gln Leu Tyr Pro
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Ala Gln Gln Thr Asp Val Tyr Tyr Gln Asp Pro Arg Gly Ala Ala Pro
20          25          30
Pro Phe Glu Pro Ala Pro Tyr Gln Gln Gly Met Tyr Tyr Thr Pro Pro

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355 360 365  
 Lys Glu Lys Ile Lys Glu Lys Gly Ser Phe Ser Asp Thr Gly Leu Gly  
 370 375 380  
 Asp Gly Lys Met Lys Ser Asp Ser Phe Ala Pro Lys Thr Asp Ser Glu  
 385 390 395 400  
 Lys Pro Phe Arg Gly Ser Gln Ser Pro Lys Arg Tyr Lys Leu Arg Asp  
 405 410 415  
 Asp Phe Glu Lys Lys Met Ala Asp Phe His Lys Glu Glu Met Asp Asp  
 420 425 430  
 Gln Asp Lys Asp Lys Ala Lys Gly Arg Lys Glu Ser Glu Phe Asp Asp  
 435 440 445  
 Glu Pro Lys Phe Met Ser Lys Val Ile Gly Ala Asn Lys Asn Gln Glu  
 450 455 460  
 Glu Glu Lys Ser Gly Lys Trp Glu Gly Leu Val Tyr Ala Pro Pro Gly  
 465 470 475 480  
 Lys Glu Lys Gln Arg Lys Thr Glu Glu Leu Glu Glu Glu Ser Phe Pro  
 485 490 495  
 Glu Arg Ser Lys Lys Glu Asp Arg Gly Lys Arg Ser Glu Gly Gly His  
 500 505 510  
 Arg Gly Phe Val Pro Glu Lys Asn Phe Arg Val Thr Ala Tyr Lys Ala  
 515 520 525  
 Val Gln Glu Lys Ser Ser Ser Pro Pro Pro Arg Lys Thr Ser Glu Ser  
 530 535 540  
 Arg Asp Lys Leu Gly Ala Lys Gly Asp Phe Pro Thr Gly Lys Ser Ser  
 545 550 555 560  
 Phe Ser Ile Thr Arg Glu Ala Gln Val Asn Val Arg Met Asp Ser Phe  
 565 570 575  
 Asp Glu Asp Leu Ala Arg Pro Ser Gly Leu Leu Ala Gln Glu Arg Lys  
 580 585 590  
 Leu Cys Arg Asp Leu Val His Ser Asn Lys Lys Glu Gln Glu Phe Arg  
 595 600 605  
 Ser Ile Phe Gln His Ile Gln Ser Ala Gln Ser Gln Arg Ser Pro Ser  
 610 615 620  
 Glu Leu Phe Ala Gln His Ile Val Thr Ile Val His His Val Lys Glu  
 625 630 635 640  
 His His Phe Gly Ser Ser Gly Met Thr Leu His Glu Arg Phe Thr Lys  
 645 650 655  
 Tyr Leu Lys Arg Gly Thr Glu Gln Glu Ala Ala Lys Asn Lys Lys Ser  
 660 665 670  
 Pro Glu Ile His Arg Arg Ile Asp Ile Ser Pro Ser Thr Phe Arg Lys  
 675 680 685  
 His Gly Leu Ala His Asp Glu Met Lys Ser Pro Arg Glu Pro Gly Tyr  
 690 695 700  
 Lys Ala Glu Gly Lys Tyr Lys Asp Asp Pro Val Asp Leu Arg Leu Asp  
 705 710 715 720  
 Ile Glu Arg Arg Lys Lys His Lys Glu Arg Asp Leu Lys Arg Gly Lys  
 725 730 735  
 Ser Arg Glu Ser Val Asp Ser Arg Asp Ser Ser His Ser Arg Glu Arg  
 740 745 750  
 Ser Ala Glu Lys Thr Glu Lys Thr His Lys Gly Ser Lys Lys Gln Lys  
 755 760 765  
 Lys His Arg Arg Ala Arg Asp Arg Ser Arg Ser Ser Ser Ser Ser  
 770 775 780  
 Gln Ser Ser His Ser Tyr Lys Ala Glu Glu Tyr Thr Glu Glu Thr Glu

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4522

<210> 3990

<211> 955

<212> PRT

<213> Homo sapiens

<400> 3990

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Arg	Ser	Ala	Ser	Arg	Ser	Arg	Ser	Arg	Ser	Phe	Ser	Lys	Ser	Arg	Ser
		20					25						30		
Arg	Ser	Arg	Ser	Leu	Ser	Arg	Ser	Arg	Lys	Arg	Arg	Leu	Ser	Ser	Arg
		35					40					45			
Ser	Arg	Ser	Arg	Ser	Tyr	Ser	Pro	Ala	His	Asn	Arg	Glu	Arg	Asn	His
	50					55				60					
Pro	Arg	Val	Tyr	Gln	Asn	Arg	Asp	Phe	Arg	Gly	His	Asn	Arg	Gly	Tyr
65					70					75				80	
Arg	Arg	Pro	Tyr	Tyr	Phe	Arg	Gly	Arg	Asn	Arg	Gly	Phe	Tyr	Pro	Trp
			85						90					95	
Gly	Gln	Tyr	Asn	Arg	Gly	Gly	Tyr	Gly	Asn	Tyr	Arg	Ser	Asn	Trp	Gln
			100					105					110		
Asn	Tyr	Arg	Gln	Ala	Tyr	Ser	Pro	Arg	Arg	Gly	Arg	Ser	Arg	Ser	Arg
		115					120					125			
Ser	Pro	Lys	Arg	Arg	Ser	Pro	Ser	Pro	Arg	Ser	Arg	Ser	His	Ser	Arg
	130					135				140					
Asn	Ser	Asp	Lys	Ser	Ser	Ser	Asp	Arg	Ser	Arg	Arg	Ser	Ser	Ser	Ser
145					150					155				160	
Arg	Ser	Ser	Ser	Asn	His	Ser	Arg	Val	Glu	Ser	Ser	Lys	Arg	Lys	Ser
			165						170					175	
Ala	Lys	Glu	Lys	Lys	Ser	Ser	Ser	Lys	Asp	Ser	Arg	Pro	Ser	Gln	Ala
		180						185					190		
Ala	Gly	Asp	Asn	Gln	Gly	Asp	Glu	Val	Lys	Glu	Gln	Thr	Phe	Ser	Gly
		195					200					205			
Gly	Thr	Ser	Gln	Asp	Thr	Lys	Ala	Ser	Glu	Ser	Ser	Lys	Pro	Trp	Pro
	210					215						220			
Asp	Ala	Thr	Tyr	Gly	Thr	Gly	Ser	Ala	Ser	Arg	Ala	Ser	Ala	Val	Ser
225					230					235				240	
Glu	Leu	Ser	Pro	Arg	Glu	Arg	Ser	Pro	Ala	Leu	Lys	Ser	Pro	Leu	Gln
			245						250					255	
Ser	Val	Val	Val	Arg	Arg	Arg	Ser	Pro	Arg	Pro	Ser	Pro	Val	Pro	Lys
		260						265					270		
Pro	Ser	Pro	Pro	Leu	Ser	Ser	Thr	Ser	Gln	Met	Gly	Ser	Thr	Leu	Pro
		275					280					285			
Ser	Gly	Ala	Gly	Tyr	Gln	Ser	Gly	Thr	His	Gln	Gly	Gln	Phe	Asp	His
	290					295					300				
Gly	Ser	Gly	Ser	Leu	Ser	Pro	Ser	Lys	Lys	Ser	Pro	Val	Gly	Lys	Ser
305					310					315				320	
Pro	Pro	Ser	Thr	Gly	Ser	Thr	Tyr	Gly	Ser	Ser	Gln	Lys	Glu	Glu	Ser
			325					330					335		
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&lt;210&gt; 3984

&lt;211&gt; 484

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 3984

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	885	890
Leu Glu Pro Asn Leu Gln Ala Gln Met Tyr Arg Leu Thr Leu Arg Thr		895
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Ser Lys Glu Ala Val Ser Gln Arg Leu Cys Glu Leu Leu Ser Ala Gln		910
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Phe		

&lt;210&gt; 3983

&lt;211&gt; 2300

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 3983

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3146

&lt;400&gt; 3982

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&lt;210&gt; 3982

&lt;211&gt; 929

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

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&lt;211&gt; 4447

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 3981

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Gly Asn Tyr Leu Leu Glu Thr Ile Lys Ser Ile Phe Glu Gln Ser Ser		110
	115	120
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Glu Asp Arg Val Lys Phe Arg Ser Lys Gln Asn Val Asp Tyr Ala Phe		190
	195	200
Leu Leu Asn Phe Cys Ala Asn Thr Ser Asp Tyr Tyr Val Met Leu Glu		205
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Asp Asp Val Arg Cys Ser Lys Asn Phe Leu Thr Ala Ile Lys Lys Val		220
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	275	280
Leu Thr His Phe Arg Gly Leu Leu Ala Gln Lys Asn Val Ile Arg Phe		285
	290	295
Lys Pro Ser Leu Phe Gln His Met Gly Tyr Tyr Ser Ser Tyr Lys Gly		300
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	340	345
Glu Asn Tyr Glu Ala Ser Lys Ala Tyr Ser Ser Val Asp Glu Tyr Phe		350
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Trp Gly Lys Pro Pro Ser Thr Gly Asp Val Phe Val Ile Val Phe Glu		365
	370	375
Asn Pro Ile Ile Ile Lys Lys Ile Lys Val Asn Thr Gly Thr Glu Asp		380
385	390	395
Arg Gln Asn Asp Ile Leu His His Gly Ala Leu Asp Val Gly Glu Asn		400
	405	410
Val Met Pro Ser Lys Gln Arg Arg Gln Cys Ser Ser Tyr Leu Arg Leu		415
	420	425
Gly Glu Phe Lys Asn Gly Asn Phe Glu Met Ser Gly Val Asn Gln Lys		430
	435	440
Ile Pro Phe Asp Ile His Cys Met Arg Ile Tyr Val Thr Lys Thr Gln		445
	450	455
Lys Glu Trp Leu Ile Ile Arg Ser Ile Ser Ile Trp Thr Ser		460
465	470	475

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&lt;210&gt; 3980

&lt;211&gt; 478

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 3980

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Met	Arg	Cys	Leu	Arg	Lys	Arg	Ser	Thr	Val	Ser	Phe	Leu	Gly	Val	Leu
			20					25					30		
Val	Ile	Phe	Leu	Leu	Phe	Met	Asn	Leu	Tyr	Ile	Glu	Asp	Ser	Tyr	Val
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290	295	300
Asp Thr Phe Ala Ala Glu Leu His Arg Leu Lys Gln Gln Pro Leu Phe		
305	310	315
Ser Leu Val Asp Phe Glu Gln Val Val Asp Arg Ile Arg Ser Thr Val		
325	330	335
Ala Glu His Leu Trp Lys Leu Met Val Glu Glu Ser Asp Leu Leu Gly		
340	345	350
Gln Leu Lys Ile Ile Lys Asp Phe Tyr Leu Leu Gly Arg Gly Glu Leu		
355	360	365
Phe Gln Ala Phe Ile Asp Thr Ala Gln His Met Leu Lys Thr Pro Pro		
370	375	380
Thr Ala Val Thr Glu His Asp Val Asn Val Ala Phe Gln Gln Ser Ala		
385	390	395
His Lys Val Leu Leu Asp Asp Asp Asn Leu Leu Pro Leu Leu His Leu		
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Thr Ile Glu Tyr His Xaa Glu Arg Ser Thr Lys Met Leu Leu Arg Xaa		
420	425	430
Arg Glu Gly Pro Ser Arg Glu Thr Ser Pro Arg Glu Ala Pro Ala Ser		
435	440	445
Gly Trp Ala Ala Leu Gly Leu Ser Tyr Lys Val Gln Trp Pro Leu His		
450	455	460
Ile Leu Phe Thr Pro Ala Val Leu Glu Lys Tyr Asn Val Val Phe Lys		
465	470	475
Tyr Leu Leu Ser Val Arg Arg Val Gln Ala Glu Leu Gln His Cys Trp		
485	490	495
Ala Leu Gln Met Gln Arg Lys His Leu Lys Ser Asn Gln Thr Asp Ala		
500	505	510
Ile Lys Trp Arg Leu Arg Asn His Met Ala Phe Leu Val Asp Asn Leu		
515	520	525
Gln Tyr Tyr Leu Gln Val Asp Val Leu Glu Ser Gln Phe Ser Gln Leu		
530	535	540
Leu His Gln Ile Asn Ser Thr Arg Asp Phe Glu Ser Ile Arg Leu Ala		
545	550	555
His Asp His Phe Leu Ser Asn Leu Leu Ala Gln Ser Phe Ile Leu Leu		
565	570	575
Lys Pro Val Phe His Cys Leu Asn Glu Ile Leu Asp Leu Cys His Ser		
580	585	590
Phe Cys Ser Leu Val Ser Gln Asn Leu Gly Pro Leu Asp Glu Arg Gly		
595	600	605
Ala Ala Gln Leu Ser Ile Leu Val Lys Gly Phe Ser Arg Gln Ser Ser		
610	615	620
Leu Leu Phe Lys Ile Leu Ser Ser Val Arg Asn His Gln Ile Asn Ser		
625	630	635
Asp Leu Ala Gln Leu Leu Arg Leu Asp Tyr Asn Lys Tyr Tyr Thr		
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Gln Ala Gly Gly Thr Leu Gly Ser Phe Gly Met		
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&lt;210&gt; 3979

&lt;211&gt; 2746

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

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<210> 3978

<211> 667

<212> PRT

<213> Homo sapiens

<400> 3978

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			20					25					30		
Phe	Leu	His	Pro	Ser	Glu	Thr	Ser	Val	Leu	Asn	Arg	Leu	Cys	Arg	Leu
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Gly	Thr	Asp	Tyr	Ile	Arg	Phe	Thr	Glu	Phe	Ile	Glu	Gln	Tyr	Thr	Gly
	50					55					60				
His	Val	Gln	Gln	Gln	Asp	His	His	Pro	Ser	Gln	Gln	Gly	Gln	Gly	Gly
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Leu	His	Gly	Ile	Tyr	Leu	Arg	Ala	Phe	Cys	Thr	Gly	Leu	Asp	Ser	Val
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Leu	Gln	Pro	Tyr	Arg	Gln	Ala	Leu	Leu	Asp	Leu	Glu	Gln	Glu	Phe	Leu
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Gly	Asp	Pro	His	Leu	Ser	Ile	Ser	His	Val	Asn	Tyr	Phe	Leu	Asp	Gln
		115						120					125		
Phe	Gln	Leu	Leu	Phe	Pro	Ser	Val	Met	Val	Val	Val	Glu	Gln	Ile	Lys
	130						135					140			
Ser	Gln	Lys	Ile	His	Gly	Cys	Gln	Ile	Leu	Glu	Thr	Val	Tyr	Lys	His
145					150					155				160	
Ser	Cys	Gly	Gly	Leu	Pro	Pro	Val	Arg	Ser	Ala	Leu	Glu	Lys	Ile	Leu
			165						170					175	
Ala	Val	Cys	His	Gly	Val	Met	Tyr	Lys	Gln	Leu	Ser	Ala	Trp	Met	Leu
		180						185						190	
His	Gly	Leu	Leu	Leu	Asp	Gln	His	Glu	Glu	Phe	Phe	Ile	Lys	Gln	Gly
	195						200						205		
Pro	Ser	Ser	Gly	Asn	Val	Ser	Ala	Gln	Pro	Glu	Glu	Asp	Glu	Glu	Asp
	210					215						220			
Leu	Gly	Ile	Gly	Gly	Leu	Thr	Gly	Lys	Gln	Leu	Arg	Glu	Leu	Gln	Asp
225					230					235				240	
Leu	Arg	Leu	Ile	Glu	Glu	Glu	Asn	Met	Leu	Ala	Pro	Ser	Leu	Lys	Gln
			245						250					255	
Phe	Ser	Leu	Arg	Val	Glu	Ile	Leu	Pro	Ser	Tyr	Ile	Pro	Val	Arg	Val
		260						265					270		
Ala	Glu	Lys	Ile	Leu	Phe	Val	Gly	Glu	Ser	Val	Gln	Met	Phe	Glu	Asn

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<210> 3976

<211> 101

<212> PRT

<213> Homo sapiens

<400> 3976

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			20					25					30		
Leu	Lys	Gly	Ala	Trp	Ala	Ser	Ala	Ser	Leu	Gln	Ala	Ala	Ser	Asn	Ser
			35					40					45		
Gln	Ser	Gly	Phe	Gly	Cys	Pro	Gln	Cys	Ser	Pro	Glu	Ala	Ala	Ala	Pro
			50					55					60		
His	Pro	Thr	Ile	Leu	Leu	Leu	Arg	Arg	Leu	Gly	Ile	Ile	Gly	Leu	Pro
						70					75				80
Trp	Lys	Gly	Ser	Ser	Arg	Arg	Gly	Leu	Arg	Glu	Pro	His	Arg	Cys	Pro
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Leu	Ala	Cys	Gln	Thr											
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<210> 3977

<211> 2668

<212> DNA

<213> Homo sapiens

<400> 3977

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720



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Trp	Arg	Leu	Lys	Thr	Pro	Asp	Asp	His	Glu	Ala	Glu	Thr	Gly	Ile	Lys		
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Ser	Lys	Glu	Ala	Arg	Lys	Tyr	Ile	Phe	Asn	Cys	Leu	Asp	Asp	Met	Ala		
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Lys	Ala	Asp	Arg	Arg	Glu	Phe	Ile	Asp	Leu	Leu	Lys	Lys	Met	Leu	Thr		
			180					185					190				
Ile	Asp	Ala	Asp	Lys	Arg	Ile	Thr	Pro	Ile	Glu	Thr	Leu	Asn	His	Pro		
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Phe	Val	Thr	Met	Thr	His	Leu	Leu	Asp	Phe	Pro	His	Ser	Thr	His	Val		
			210			215						220					
Lys	Ser	Cys	Phe	Gln	Asn	Met	Glu	Ile	Cys	Lys	Arg	Arg	Val	Asn	Met		
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Tyr	Asp	Thr	Val	Asn	Gln	Ser	Lys	Thr	Pro	Phe	Ile	Thr	His	Val	Ala		
				245					250					255			
Pro	Ser	Thr	Ser	Thr	Asn	Leu	Thr	Met	Thr	Phe	Asn	Asn	Gln	Leu	Thr		
			260					265					270				
Thr	Val	His	Asn	Gln	Pro	Ser	Ala	Ala	Ser	Met	Ala	Ala	Ala	Ala	Gln		
			275				280					285					
Arg	Ser	Met	Pro	Leu	Gln	Thr	Gly	Thr	Ala	Gln	Ile	Cys	Ala	Arg	Pro		
			290			295					300						
Asp	Pro	Phe	Gln	Gln	Ala	Leu	Ile	Val	Cys	Pro	Pro	Gly	Leu	Gln	Ala		
305					310				315						320		
Leu	Gln	Ala	Ser	Pro	Phe	Thr	Arg										
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&lt;210&gt; 3975

&lt;211&gt; 593

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 3975

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&lt;210&gt; 3974

&lt;211&gt; 328

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 3974

Leu	Gly	Leu	Ile	His	Ala	Asp	Leu	Lys	Pro	Glu	Asn	Ile	Met	Leu	Val
1				5				10					15		
Asp	Pro	Ser	Arg	Gln	Pro	Tyr	Arg	Val	Lys	Val	Ile	Asp	Phe	Gly	Ser
			20					25					30		
Ala	Ser	His	Val	Ser	Lys	Ala	Val	Cys	Ser	Thr	Tyr	Leu	Gln	Ser	Arg
		35				40						45			
Tyr	Tyr	Arg	Ala	Pro	Glu	Ile	Ile	Leu	Gly	Leu	Pro	Phe	Cys	Glu	Ala
	50					55				60					
Ile	Asp	Met	Trp	Ser	Leu	Gly	Cys	Val	Ile	Ala	Glu	Leu	Phe	Leu	Gly
65				70				75					80		
Trp	Pro	Leu	Tyr	Pro	Gly	Ala	Ser	Glu	Tyr	Asp	Gln	Ile	Arg	Tyr	Ile
			85					90					95		
Ser	Gln	Thr	Gln	Gly	Leu	Pro	Ala	Glu	Tyr	Leu	Leu	Ser	Ala	Gly	Thr

85

<210> 3971  
 <211> 433  
 <212> DNA  
 <213> Homo sapiens

<400> 3971  
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 60  
 gacagatatg tggatattaag agctctggga aaaaaatgga gcatggaagg gagagcccgg  
 120  
 ctggggaacg ggtaatcaga gaaaccctca ctcatagggt ggtgcccttt atgcagagac  
 180  
 ttaaaggaag gagggagggt ccctgacaga gagaatggta agtgcaaagg tcctgggtgg  
 240  
 gcttggtgtg aggaagagca aggccagtgt ggctggaaca gagtgagtga aggggagaga  
 300  
 gttgtaagca atgagcttag acaggaaatg gggctctgggt cacatgggaa atggtaggac  
 360  
 attgtccgaa cttgggcttt tactccgggt gaaatgggca ctctataga tgctcccgtc  
 420  
 ctaatcacca gaa  
 433

<210> 3972  
 <211> 120  
 <212> PRT  
 <213> Homo sapiens

<400> 3972  
 Met Ser Tyr His Phe Pro Cys Glu Pro Asp Pro Ile Ser Cys Leu Ser  
 1 5 10 15  
 Ser Leu Leu Thr Thr Leu Ser Pro Ser Leu Thr Leu Phe Gln Pro His  
 20 25 30  
 Trp Pro Cys Ser Ser Ser Thr Gln Ala His Pro Gly Pro Leu His Leu  
 35 40 45  
 Pro Phe Ser Leu Ser Gly Asp Leu Pro Pro Ser Phe Lys Ser Leu His  
 50 55 60  
 Lys Gly His His Pro Met Ser Glu Gly Phe Ser Asp Tyr Pro Phe Pro  
 65 70 75 80  
 Ser Arg Ala Leu Pro Ser Met Leu His Phe Phe Pro Arg Ala Leu Asn  
 85 90 95  
 Thr Thr Tyr Leu Ser Phe Ile Phe Ser Leu Ser Phe Phe Cys Leu Leu  
 100 105 110  
 Pro Leu Glu His His Gln Ser Arg  
 115 120

<210> 3973  
 <211> 984  
 <212> DNA  
 <213> Homo sapiens

<400> 3973

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 3969

```

ggcacctcgg gcaggacctc cctggtcgga agtggccgtg agcccaagcc gcggtcccgg
60
gtgagtacgg ggcggggcgg aggcattgtc gaggtctctt gcctgtacgc tggaaagtgg
120
ggattgcaac tcggggaggg atggagcacg cgtcgtcgcc tgggaaacgg gtcgacccgc
180
ggaaggcgag cgggtgggac ttccggagca gttaatgggt gggaaacttt ctagtggatg
240
tgggaggagg cgggacttcc tgcagcaaat tggggctgtg cgcgctcaa gcccgtttac
300
ctgctcccca ggccggcacc caggatgggc gaggtggagg ccccgggccg cttgtggctc
360
gagagccccc ctggggggagc gccccccatc ttctgtccct cggacgggca agccctggtc
420
ctgggcaggg gacccctgac ccaggttacg gaccggaagt gctccagaac tcaagtggag
480
ctggtcgag atcctgagac ccggacagtg gcagtgaac aggtatcagt gcctctgcaa
540
gggccagcaa ggcctgggga tgggatttgg ggaggaattg caagccgtca gtgaaggggt
600
acattaggaa aatctgattg gggccgggcg tgggtggctca agcctgtaat cccagcactt
660
tgggaggccg aggcgggagg atcgcttgaa cccaggagtt cgagaccagc ctgagcgaca
720
tgggtgaaacc tgtctctcta aaaaattagc gggaatgggt gcgctcctt gtagttccta
780
atcgggaggg tgaagcggga ggatcccttg agcccagtag gtcaaggggt tagtgagcag
840
tgatcaccac actgtacttc agcctgggtg acagagcgag aacctgtctc aaaaaaagaa
900
aagaaaaaat atggc
915

```

&lt;210&gt; 3970

&lt;211&gt; 89

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 3970

```

Met Gly Glu Val Glu Ala Pro Gly Arg Leu Trp Leu Glu Ser Pro Pro
1           5           10           15
Gly Gly Ala Pro Pro Ile Phe Leu Pro Ser Asp Gly Gln Ala Leu Val
20           25           30
Leu Gly Arg Gly Pro Leu Thr Gln Val Thr Asp Arg Lys Cys Ser Arg
35           40           45
Thr Gln Val Glu Leu Val Ala Asp Pro Glu Thr Arg Thr Val Ala Val
50           55           60
Lys Gln Val Ser Val Pro Leu Gln Gly Pro Ala Arg Pro Gly Asp Gly
65           70           75           80
Ile Trp Gly Gly Ile Ala Ser Arg Gln

```

gccctggagg tggagtggca cctgctggcc caccacagca tcacagatgt ggctgtgatt  
 240  
 ggagttccgg atatgacatg gggccagcgg gtcactgctg tggtgaccct ccgagaagga  
 300  
 cactcactgt cccacagggg gctcaaagag tgggcccagaa atgtcctggc cccgtacgcg  
 360  
 gtgccctcgg agctggtgct ggtggaggag atcccgcgga accagatggg caagattgac  
 420  
 aagaaggcgc tcatcaggca cttccacccc tcatgacccg gcagactggg actgcgggtc  
 480  
 tgggtggggag cagcagacgt ccccttcaca ccgagaacca cgggggcccg tccaagacct  
 540  
 ggctccctt aaacctgaac ccccaaatc aggtcacgta gaatcaagaa ctgtttggga  
 600  
 tgaaatcacc atgtgggggc cccagcctcg ggccagttgt tgcagctcaa ggagaccgtc  
 660  
 cctggtgtca cctctgctg gtcaccgccc acctcatctg tgcagcgcg tgcagccagc  
 720  
 ccctggcccc acgtgctgag gcacctccc cccacagtg ccctgcagtt gccaggctct  
 780  
 ccagggcagg tcccagaggt ttcccacaaa aaacaaataa agactccact ggaggaaaca  
 840  
 aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aa  
 892

&lt;210&gt; 3968

&lt;211&gt; 151

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 3968

Xaa Pro Ala Arg Pro Arg Arg Ala Arg Gly Gly Gly Arg Gly Arg Val  
 1 5 10 15  
 Val Ala Arg Gln Ile Leu Pro Arg Gly Arg Gly Arg Leu Val Gly Asp  
 20 25 30  
 Thr Val Val Phe Lys Asp Gly Gln Tyr Trp Ile Arg Gly Arg Thr Ser  
 35 40 45  
 Val Asp Ile Ile Lys Thr Gly Gly Tyr Lys Val Ser Ala Leu Glu Val  
 50 55 60  
 Glu Trp His Leu Leu Ala His Pro Ser Ile Thr Asp Val Ala Val Ile  
 65 70 75 80  
 Gly Val Pro Asp Met Thr Trp Gly Gln Arg Val Thr Ala Val Val Thr  
 85 90 95  
 Leu Arg Glu Gly His Ser Leu Ser His Arg Glu Leu Lys Glu Trp Ala  
 100 105 110  
 Arg Asn Val Leu Ala Pro Tyr Ala Val Pro Ser Glu Leu Val Leu Val  
 115 120 125  
 Glu Glu Ile Pro Arg Asn Gln Met Gly Lys Ile Asp Lys Lys Ala Leu  
 130 135 140  
 Ile Arg His Phe His Pro Ser  
 145 150

&lt;210&gt; 3969

&lt;211&gt; 915

```

      450              455              460
Gly Pro Tyr Ile Phe Leu Glu Gly Lys Lys Pro Leu Leu Tyr Phe Pro
465              470              475              480
Asp Thr Pro Pro Pro Leu Glu Lys Ala Ala Glu Ala Ala Leu Phe
      485              490              495
Lys Gly Lys Trp Asp Asp Glu Ala Arg Glu Met Ala Pro Pro Ala
      500              505              510
Pro Leu Leu Ala Pro Arg Pro Gly Glu Thr Arg Pro Gly Cys Arg Lys
      515              520              525
Pro Gly Thr Val Ser Phe Ala Asp Val Ala Val Tyr Phe Ser Pro Glu
      530              535              540
Glu Trp Gly Cys Leu Arg Pro Ala Gln Arg Ala Leu Tyr Arg Asp Val
545              550              555              560
Met Gln Glu Thr Tyr Gly His Leu Gly Ala Leu Gly Phe Pro Gly Pro
      565              570              575
Lys Pro Ala Leu Ile Ser Trp Met Glu Gln Glu Ser Glu Ala Trp Ser
      580              585              590
Pro Ala Ala Gln Asp Pro Glu Lys Gly Glu Arg Leu Gly Gly Ala Arg
      595              600              605
Arg Gly Asp Val Pro Asn Arg Lys Glu Glu Glu Pro Glu Glu Val Pro
      610              615              620
Arg Ala Lys Gly Pro Arg Lys Ala Pro Val Lys Glu Ser Pro Glu Val
625              630              635              640
Leu Val Glu Arg Asn Pro Asp Pro Ala Ile Ser Val Ala Pro Ala Arg
      645              650              655
Ala Gln Pro Pro Lys Asn Ala Ala Trp Asp Pro Thr Thr Gly Ala Gln
      660              665              670
Pro Pro Ala Pro Ile Pro Ser Met Asp Ala Gln Ala Gly Gln Arg Arg
      675              680              685
His Val Cys Thr Asp Cys Gly Arg Arg Phe Thr Tyr Pro Ser Leu Leu
      690              695              700
Val Ser His Arg Arg Met His Ser Gly Glu Arg Pro Phe Pro Cys Pro
705              710              715              720
Glu Cys Gly Met Arg Phe Lys Arg Lys Phe Ala Val Glu Ala His Gln
      725              730              735
Trp Ile His Arg Ser Cys Ser Gly Gly Arg Arg Gly Arg Arg Pro Gly
      740              745              750
Ile Arg Ala Val Pro Arg Ala Pro Val Arg Gly Asp Arg Asp Pro Pro
      755              760              765
Val Leu Phe Arg His Tyr Pro Asp Ile Phe Glu Glu Cys Gly
      770              775              780

```

&lt;210&gt; 3967

&lt;211&gt; 892

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 3967

```

naccgcggccc gaccccgccg cgcgcgcggc ggaggacgag gaagagttgt ggcgaggcag
60
atcctgcccc gtggcccgccg ccgtctcgta ggggacaccg tgggtgttaa ggatggccag
120
tactggatcc gaggccggac ctcaaggac atcatcaaga ctggaggcta caaggtcagc
180

```

3128

tattgcgggc acagaggggt aagtgaagct tcgggccctt acatctttct tgaaggcaag  
 1620  
 aagcctctcc tctacttccc agacaccccg cctccccac tagaaaaagc agccgaagcg  
 1680  
 gctttattta agggcaagtg ggacgatgag gccagagaaa tggcgccgcc cccagccccg  
 1740  
 ctccctggcg cgaggcccg ggagaccgg cctgggtgca ggaagcccg gactgtgagc  
 1800  
 ttccgggacg tggccgtgta cttctcccc gagagtgagg gctgtctgag gcccgcgagc  
 1860  
 agggctctgt accgggacgt gatgcaggag acctacggcc acctggggcg gctcggatc  
 1920  
 ccaggcccca aaccagccct catctcttgg atggaacagg agagtgaggc ttggagcccc  
 1980  
 gccgcccagg atcctgagaa gggggaaaga ctgggaggag ctcgagagag agatgtccca  
 2040  
 aacaggaagg aagaggaacc ggaggaagtc ccaagagcca aagggcctag aaaggctcct  
 2100  
 gtgaaggaga gtcctgaagt gctggtggaa cgcaaccctg acccagctat tagcgtggcc  
 2160  
 ccggcacggg cacagccacc caaaaatgct gcctgggacc cgaccacagg agcacagccc  
 2220  
 ccggcaccca taccagcat ggatgctcag gccggccagc ggcgccacgt gtgcacggac  
 2280  
 tgcggccgcc gcttcaccta cccctcactg ctggtcagcc acaggcgcat gcactcgggg  
 2340  
 gaggcgccct tccctgccc cgagtgtggc atgcgcttca agaggaagtt cgcagtggaa  
 2400  
 gcgcaccagt ggatccaccg ctccctgctc gggggcgggc ggggccggag gcctgggac  
 2460  
 cgggctgtgc ctggggcccc cgtccgaggt gaccgggacc cgcctgtgct cttccggcac  
 2520  
 taccagaca tcttcgagga gtgcggctga gcggcaccgc aggttgaggt tgagcctgac  
 2580  
 cttggcacga aggactgacg gatccctgag gtgggccact gactcgggga ctccggaact  
 2640  
 gaaattcatg ccctgggctt tcctcaagga tcctcaagt ttccaacttg taaaaagaaa  
 2700  
 agtgcctgta aagattcgaa tagattagac ttgccacca tctccccagt cttttgttta  
 2760  
 aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aagagagtga gaccctggac tcatttcaaa  
 2820  
 gtgttatctg aagatcaggt gcaacagaga  
 2850

&lt;210&gt; 3966

&lt;211&gt; 782

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 3966

Met Gly Pro Pro Leu Ala Pro Arg Pro Ala His Val Pro Gly Glu Ala  
 1 5 10 15  
 Gly Pro Arg Arg Thr Arg Glu Ser Arg Pro Gly Ala Val Ser Phe Ala



<400> 3965  
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60  
gcgaggggtg ttgacgccag gaaggttcca tcttggttaa gggcaggagt cccttacgga  
120  
cttgtctgag gaaagacagg aaagcgccag catctccacc ttccccgaa gcctcccttt  
180  
gccaggcaga aagggtttcc catggggccg cccctggcgc cgcgccggc ccacgtacc  
240  
ggggaggccg ggccccggag gacgagggaa agcaggcccg gcgccgtgag cttcgcggac  
300  
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360  
taccgggacg tgatgcggga gaccttcggc cacctggcg cgtgggtga ggccgggccc  
420  
tccggccggg acccccagtc cgtcggattt tcagttccca aaccgcctt tatctcgtg  
480  
gtggaaggag aagtggaggc gtggagcccg gaggcccagg atcccgacgg tgagagctct  
540  
gcagctttca gcaggggcca aggacaggaa gcaggatcca gggatgggaa tgaggagaag  
600  
gaaaggctga agaagtgtcc aaaacaaaaa gaggtggcgc atgaagtggc tgtcaaggag  
660  
tggtggccca gcgtgcctg cccagagttc tgcaacccta ggcagagccc catgaatccc  
720  
tggtcaagg acactctgac ccgaagactg cccactctt gccagactg tggccgcaac  
780  
ttcagctacc cttccctcct ggccagccac cagcgggtcc actccgggga gcggcccttc  
840  
tcctgcggcc agtgtcaggc gcgtttctcc cagcgcagg acctgctcca gcatcagttc  
900  
atccacaccg gcgagaagcc ctaccctgc cccgactgcg gcgcgcgctt ccgccagagg  
960  
ggttccctgg ctatccacag gcgggtcac accggggaga agccttacgc gtgctcagac  
1020  
tgcaagagtc gttcactta cccctacctg ctggccatcc accagcgcaa gcacacgggc  
1080  
gagaagccct acagctgcc cgattgcagc ctccgtttcg cctacacctc cctgctggcc  
1140  
atccacaggc gcatacacac cggcgagaag ccctaccct gtctgactg cggccgccc  
1200  
ttcacctatt cttccctcct cctcagtcac cggcgcatte actccgacag ccggcccttc  
1260  
ccctgcgtgg agtgtgggaa aggcttcaag cgcaagaccg ccctggaagc ccatcggtgg  
1320  
atccaccgct cctgcagoga gaggcgcgcg tggcagcagg cctggtggg gcgttcagag  
1380  
ccatccctg ttttgggagg caaggatccc ccagttcact tccggcactt tccagatata  
1440  
tttcaagagt tctgtcaaca gaggttcag gaccgcgggg tcccttcaaa tgccccgcca  
1500  
gtcccaggcc aatcacccg cagcttcttc cgggatcgtc gccaatcacc ggccgttgcg  
1560

```

      50              55              60
Met Glu Ile Asp Lys His Ser Leu Asn Ile Gly Asp Tyr Asn Arg Thr
65              70              75              80
Val Gly Lys Gly Pro Gly Ser Arg Pro Gln Ile Ser Lys Glu Ser Ser
      85              90              95
Met Glu Arg Asn Pro Tyr Phe Asp Lys Asn Gly Asn Pro Ser Met Phe
      100              105              110
Gly Val Gly Asn Thr Ala Ala Gln Pro Arg Gly Met Gln Gln Pro Pro
      115              120              125
Ala Gln Pro Leu Ser Ser Ser Gln Pro Asn Leu Arg Ala Gln Val Pro
      130              135              140
Pro Pro Leu Leu Ser Pro Gln Val Pro Val Ser Leu Leu Lys Tyr Ala
145              150              155              160
Pro Asn Asn Gly Gly Leu Asn Pro Leu Phe Gly Pro Gln Gln Val Ala
      165              170              175
Met Leu Asn Gln Leu Ser Gln Leu Asn Gln Leu Ser Gln Ile Ser Gln
      180              185              190
Leu Gln Arg Leu Leu Ala Gln Gln Gln Arg Ala Gln Ser Gln Arg Ser
      195              200              205
Val Pro Ser Gly Asn Arg Pro Gln Gln Asp Gln Gln Gly Arg Pro Leu
      210              215              220
Ser Val Gln Gln Gln Met Met Gln Gln Ser Arg Gln Leu Asp Pro Asn
225              230              235              240
Leu Leu Val Lys Gln Gln Thr Pro Pro Ser Gln Gln Gln Pro Leu His
      245              250              255
Gln Pro Ala Met Lys Ser Phe Leu Asp Asn Val Met Pro His Thr Thr
      260              265              270
Pro Glu Leu Gln Lys Gly Pro Ser Pro Ile Asn Ala Phe Ser Asn Phe
      275              280              285
Pro Ile Gly Leu Asn Ser Asn Leu Asn Val Asn Met Asp Met Asn Ser
      290              295              300
Ile Lys Glu Pro Gln Ser Arg Leu Arg Lys Trp Thr Thr Val Asp Ser
305              310              315              320
Ile Ser Val Asn Thr Ser Leu Asp Gln Asn Ser Ser Lys His Gly Ala
      325              330              335
Ile Ser Ser Gly Phe Arg Leu Glu Glu Ser Pro Phe Val Pro Tyr Asp
      340              345              350
Phe Met Asn Ser Ser Thr Ser Pro Ala Ser Pro Pro Gly Ser Ile Gly
      355              360              365
Asp Gly Trp Pro Arg Ala Lys Ser Pro Asn Gly Ser Ser Ser Val Asn
      370              375              380
Trp Pro Pro Glu Phe Arg Pro Gly Glu Pro Trp Lys Gly Tyr Pro Asn
385              390              395              400
Ile Asp Pro Glu Thr Asp Pro Tyr Val Thr Pro Gly Ser Val Ile Asn
      405              410              415
Asn Leu Pro Ile Asn Thr Val Arg Glu Val Asp His Leu Arg Asp Arg
      420              425              430
Asn Ser Gly Thr
      435

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&lt;210&gt; 3965

&lt;211&gt; 2850

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

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 cctccagcac aacctcttag ttcattctcag cctaattctcc gtgctcaagt gcctcctcca  
 480  
 ttactctccc ctcaggttcc agtttcattg ctgaagtatg caccaaacaa cgggtggcctg  
 540  
 aatccactct ttggccctca acaggtagcc atgctgaacc agctatccca gctaaaccag  
 600  
 ctttctcaga tctcccagtt acagcgattg ttagcgagc agcaaagggc gcagagtcag  
 660  
 agaagcgtgc cttctgggaa ccggccgcag caagaccagc agggtcgacc tcttagtgtg  
 720  
 cagcagcaaa tgatgcaaca atctcgtcaa cttgatccaa acctgttggg gaagcagcag  
 780  
 actccaccat ctcagcagca gccactccat cagccagcca tgaagtcttt ccttgacaat  
 840  
 gtcattgcccc acactacacc tgagctgcaa aaagggccat caccaataaa tgctttcagc  
 900  
 aacttcccta taggcttgaa ctcaaacttg aatgtaaata tggatatgaa cagtattaaa  
 960  
 gagccacagt caagactaag gaagtggacg acagtggaca gcatttctgt gaacacatct  
 1020  
 ttggatcaaa actccagcaa acatggtgct atttcaagtg gtttcaggct ggaagagtct  
 1080  
 ccatttgttc cctatgactt tatgaacagc agtacttcac cagccagtcc tccaggttca  
 1140  
 ataggagatg gctggccacg tgccaaatcg cctaacggct ctagcagtgt taattggcca  
 1200  
 ccagaatttc gtctggtga gccatggaaa ggttatccaa acattgacct tgaaactgac  
 1260  
 ccttacgtca ctctggcag tgcataaac aatcttccaa ttaatactgt gcgggaagt  
 1320  
 gaccacctca gggacaggaa cagtggtagc taggggggtgc aaatcaattt ctgagtgcag  
 1380  
 cttaacacag ttaagaatg gtcattgtag taaccagcta ctctgggcca ctgagcccag  
 1440  
 ggtactctgg gatcacttga gccaggagc ttgagcaagc ctgggcaaca tagttgtggg  
 1500  
 accctgtctc ttt  
 1513

&lt;210&gt; 3964

&lt;211&gt; 436

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 3964

Met	Ala	Met	Ala	Ser	Phe	Leu	Leu	Phe	Tyr	Phe	Thr	Lys	Gly	Met	Met
1				5					10					15	
Lys	Gly	Gly	Asn	Lys	Gln	Glu	Glu	Ala	Trp	Ile	Asn	Pro	Phe	Val	Lys
			20					25					30		
Gln	Phe	Ser	Asn	Ile	Ser	Phe	Ser	Arg	Asp	Ser	Pro	Glu	Glu	Asn	Val
			35				40				45				
Gln	Ser	Asn	Lys	Met	Asp	Leu	Ser	Gly	Gly	Met	Leu	Gln	Asp	Lys	Arg

35 40 45  
 Val Ala Glu Val Thr Thr Cys Glu Tyr Glu Val Val Ile Leu Thr Pro  
 50 55 60  
 Leu Leu Cys Ser His Pro Lys Tyr Arg Phe Arg Ala Ser Pro Val Asn  
 65 70 75 80  
 Asp Ile Phe Cys Gln Ser Leu Pro Gly Ser Pro Phe Lys Pro Leu Thr  
 85 90 95  
 Leu Arg Gln Leu Glu Gln Gln Glu Glu Ile Leu Arg Val Pro Phe Arg  
 100 105 110  
 Arg Asn Lys Glu Glu Asp Leu Gln Ser Thr Lys Glu Glu Arg Phe Pro  
 115 120 125  
 Ala Ile His Lys Ser Ile Ala Ile Gly Ser Gln Pro Val Leu Thr Val  
 130 135 140  
 Gly Thr Thr His Ile Ser Lys Leu Thr Asp Asp Gln Leu Ile Lys Glu  
 145 150 155 160  
 Phe Leu Ser Gly Ser Tyr Cys Phe Arg Gly Gly Val Gly Trp Trp Lys  
 165 170 175  
 Tyr Glu Phe Cys Tyr Gly Lys His Val His Gln Tyr His Glu Asp Lys  
 180 185 190  
 Asp Ser Gly Lys Thr Ser Val Val Val Gly Thr Trp Asn Gln Glu Glu  
 195 200 205  
 His Ile Glu Trp Ala Lys Lys Asn Thr Ala Arg Ala Tyr His Leu Gln  
 210 215 220  
 Asp Asp Gly Thr Gln Thr Val Arg Met Val Ser His Phe Tyr Gly Asn  
 225 230 235 240  
 Gly Asp Ile Cys Asp Ile Thr Asp Lys Pro Arg Gln Val Thr Val Lys  
 245 250 255  
 Leu Lys Cys Lys Glu Ser Asp Ser Pro His Ala Val Thr Val Tyr Met  
 260 265 270  
 Leu Glu Pro His Ser Cys Gln Tyr Ile Leu Gly Val Glu Ser Pro Val  
 275 280 285  
 Ile Cys Lys Ile Leu Asp Thr Ala Asp Glu Asn Gly Leu Leu Ser Leu  
 290 295 300  
 Pro Asn  
 305

&lt;210&gt; 3963

&lt;211&gt; 1513

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 3963

 ctttaagggtgt attaatccgt cactataccc agataaacag agatggccat ggcattcttt  
 60

 ctactctttt attttacaaa gggaatgatg aaaggtggaa acaaacaaga agaagcgtgg  
 120

 ataatccat ttgttaaaca gttttcaaac atcagttttt cgagagactc accagaggaa  
 180

 aatgtacaaa gcaataagat ggacctttct ggaggaatgt tacaagacaa acgaatggag  
 240

 atagataaac atagcctaaa tattggtgat tacaatcgaa cggtcgggaa aggccctgg  
 300

 tctcggcctc agatttccaa agagtcttcc atggagcgca atccttattt tgataagaat  
 360

caataccatg aggacaagga tagtgggaaa acctctgtgg ttgtcgggac atggaaccaa  
 1320  
 gaagagcata ttgaatgggc taagaagaat actgctagag cttatcatct tcaagacgat  
 1380  
 ggtaccaga cagtcaggat ggtgtcacat ttttatggaa atggagatat ttgtgatata  
 1440  
 actgacaaac caagacaggt gactgtaaaa ctaaagtga aagaatcaga ttcacctcat  
 1500  
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&lt;211&gt; 306

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 3962

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&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 3958

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&lt;211&gt; 3891

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

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&lt;211&gt; 522

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 3955

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&lt;211&gt; 174

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&lt;213&gt; Homo sapiens

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 2700  
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 2760  
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&lt;210&gt; 3954

&lt;211&gt; 627

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 3954

Met Gly Leu Leu Gln Gly Leu Leu Arg Val Arg Lys Leu Leu Leu Val  
 1 5 10 15  
 Val Cys Val Pro Leu Leu Leu Leu Pro Leu Pro Val Leu His Pro Ser

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60  
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120  
gacaagctca ggtgcttgtt ttaaggaaag gggctactag agtcttacca acagcgagcc  
180  
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240  
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300  
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1380  
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 900  
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 1012

<210> 3952

<211> 188

<212> PRT

<213> Homo sapiens

<400> 3952

Met	Lys	Thr	Leu	Thr	Arg	Val	Gln	Pro	Val	Phe	His	Phe	Lys	Pro	Thr
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Thr	Val	Val	Thr	Ser	Cys	Gln	Pro	Lys	Asn	Pro	Arg	Glu	Leu	His	Arg
			20					25					30		
Arg	Arg	Lys	Leu	Asp	Pro	Gly	Lys	Met	His	Ala	Lys	Ile	Trp	Leu	Met
		35					40					45			
Lys	Thr	Ser	Leu	Arg	Ser	Gly	Arg	Ala	Ala	Leu	Arg	Glu	Leu	Arg	Ser
	50					55					60				
Arg	Glu	Asn	Phe	Leu	Ser	Lys	Leu	Asn	Arg	Glu	Leu	Ile	Glu	Thr	Ile
65				70					75					80	
Gln	Glu	Met	Glu	Asn	Ser	Thr	Thr	Leu	His	Val	Arg	Ala	Leu	Leu	Gln
			85						90					95	
Gln	Gln	Asp	Thr	Leu	Ala	Thr	Ile	Ile	Asp	Ile	Leu	Glu	Tyr	Ser	Asn
			100					105					110		
Lys	Lys	Arg	Leu	Gln	Gln	Leu	Lys	Ser	Glu	Leu	Gln	Glu	Trp	Glu	Glu
		115					120					125			
Lys	Lys	Lys	Cys	Lys	Met	Ser	Tyr	Leu	Glu	Gln	Gln	Ala	Glu	Gln	Leu
		130				135						140			
Asn	Ala	Lys	Ile	Glu	Lys	Thr	Gln	Glu	Glu	Val	Asn	Phe	Leu	Ser	Thr
145				150					155					160	
Tyr	Met	Asp	His	Glu	Tyr	Ser	Ile	Lys	Ser	Val	Gln	Ile	Ser	Thr	Leu
			165						170					175	
Met	Arg	His	Cys	Ser	Arg	Leu	Arg	Thr	Ala	Ser	Arg				
			180					185							

<210> 3953

<211> 2900

<212> DNA

<213> Homo sapiens

<400> 3953



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130	135	140
Glu Lys Asp Cys Pro Gly Val Leu Trp Ile Phe Leu Asp Tyr Phe Gln		
145	150	155
Thr Ser His Leu Gly His Ser Gly Leu Pro Pro Leu Ser Asp Gln Tyr		
165	170	175
Pro Arg Glu Glu Leu Thr Arg Ile Val Arg Asn Ala Asp Glu Ile Ala		
180	185	190
Glu Tyr Leu Gln Lys Glu Met Gln Leu Ile Ile Glu Asn Pro Pro Ile		
195	200	205
Asn Ile Pro Thr Gly Cys Leu Glu Val Phe Pro Glu Ala Glu Trp Ser		
210	215	220
Gln Gly Val Gln Gly Thr Leu Arg Ile Lys Lys Tyr Leu Thr Val Glu		
225	230	235
Gln Ile Met Thr Cys Val Ala Asp Thr Cys Arg Arg Phe Phe Asp Arg		
245	250	255
Gly Tyr Ser Pro Lys Asp Val Ala Val Leu Val Ser Thr Ala Lys Glu		
260	265	270
Val Glu His Tyr Lys Tyr Glu Leu Leu Lys Ala Met Arg Lys Lys Arg		
275	280	285
Val Val Gln Leu Ser Asp Ala Cys Asp Met Leu Gly Asp His Ile Val		
290	295	300
Leu Asp Ser Val Arg Arg Phe Ser Gly Leu Glu Arg Ser Ile Val Phe		
305	310	315
Gly Ile His Pro Arg Thr Ala Asp Pro Ala Ile Leu Pro Asn Ile Leu		
325	330	335
Ile Cys Leu Ala Ser Arg Ala Lys Gln His Leu Tyr Ile Phe Leu		
340	345	350

&lt;210&gt; 3951

&lt;211&gt; 1012

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 3951

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120

gtccaggagt tccaggttcc ggattatggt ccatggcagc agtccaagca ggaaaccaag  
180

ccatctactc tgctccagt ccaacaagcc aacagccttc atacaagcaa aatgaagact  
240

ttgactaggg tccaaccagt gtttcacttc aagcccacta cgggtgtgac aagctgccag  
300

ccgaagaatc caagagaact acatagaagg cggaagttgg accctgggaa gatgcatgcc  
360

aaaatctggt taatgaagac ctgcctcagg agcgggaggg ccgctctgcg agagctccga  
420

agccgtgaga acttctcag caagctcaac cgggagctga tcgagaccat ccaggagatg  
480

gagaacagca cgacctgca cgtgcggggc ctgctgcagc agcaggacac cctggcgacc  
540

atcactgagc tgcaccaccc tttcttctct cattgctttc aagagctcat acttatagt  
 600  
 ctccacttct tttgcggtgc tgacaagcac agcaacatcc tttggagaat agccctatc  
 660  
 aaagaagcgc ctgcacgtgt ctgccacaca ggtcattatt tgctccacag tcaagtattt  
 720  
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 780  
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 960  
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 1260  
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 1380  
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 1462

&lt;210&gt; 3950

&lt;211&gt; 351

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 3950

Met	Glu	Ala	Leu	Leu	Gln	Ser	Leu	Val	Ile	Val	Leu	Leu	Gly	Phe	Arg
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Ser	Leu	Leu	Ser	Asp	Gln	Leu	Gly	Cys	Glu	Val	Leu	Asn	Leu	Leu	Thr
		20					25					30			
Ala	Gln	Gln	Tyr	Glu	Ile	Phe	Ser	Arg	Ser	Leu	Arg	Lys	Asn	Arg	Glu
		35					40					45			
Leu	Phe	Val	His	Gly	Leu	Pro	Gly	Ser	Gly	Lys	Asn	Ile	Met	Ala	Met
		50				55					60				
Lys	Ile	Met	Glu	Lys	Ile	Arg	Asn	Val	Phe	His	Cys	Glu	Ala	His	Arg
65					70				75					80	
Ile	Leu	Tyr	Val	Cys	Glu	Asn	Gln	Pro	Leu	Arg	Asn	Phe	Ile	Ser	Asp
			85					90					95		
Arg	Asn	Ile	Cys	Arg	Ala	Glu	Thr	Arg	Glu	Thr	Phe	Leu	Arg	Glu	Lys
			100					105					110		
Phe	Glu	His	Ile	Gln	His	Ile	Val	Ile	Asp	Glu	Ala	Gln	Asn	Phe	Arg

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400

<210> 3948  
<211> 133  
<212> PRT  
<213> Homo sapiens

<400> 3948  
Xaa Glu Lys Gln Ala Ile Leu Leu Ala Leu Ile Glu Glu Arg Gly Arg  
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Phe Cys Thr Phe Ile Thr Phe Leu Gln Pro Val Val Asn Gly Glu Leu  
20 25 30  
Thr Met Leu Gly Glu Ile Thr His Leu Gln Gly Ile Ile Asp Asp Leu  
35 40 45  
Val Val Leu Thr Ala Glu Pro His Lys Leu Pro Pro Ala Ser Glu Gln  
50 55 60  
Val Ile Lys Asp Leu Lys Gly Ser Asp Tyr Ser Trp Ser Tyr Gln Thr  
65 70 75 80  
Pro Pro Ser Ser Pro Ser Ser Ser Ser Ser Arg Lys Ser Ser Met Cys  
85 90 95  
Ser Ala Pro Ser Ser Ser Ser Ser Ala Lys Gly Gly Gly Ser Pro Met  
100 105 110  
Ala Trp Gly Cys Pro Asn Ile Leu Thr Gln Phe His Leu Ser Leu Pro  
115 120 125  
Gln Pro Gly Ala Ala  
130

<210> 3949  
<211> 1462  
<212> DNA  
<213> Homo sapiens

<400> 3949  
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120  
ccaccatctt tctggctgca agagtcaggg gtcagaatgg ggggcagcca ccactgctga  
180  
aaagagtgg gggaggaacc cctgaaagga gagccagaaa tgggggagct ccaaactctt  
240  
tgtgtcagct ctgtccaaat ctctaactga cttgtgaact aaaaagaaag gtttctacca  
300  
tcagcagact gtcaccata gacatttaca cagtattttg gtttggagtt cttcctaata  
360  
gtcacttcac agaaaaatat ataggtgctg ttttgccctg gaagccagac agatcagaat  
420  
attgggtaag atagctgggt cagctgtcct tggatggatc ccaaacta tgctccttc  
480  
caggcctgag aatcgccgaa cactgtccaa cacaatgtga tcaccaaca tatcacatgc  
540

ctgcgataac ctgcatctct gcaaactcaa cttgctgggc cggtgcaact attcgagtc  
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 600  
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 660  
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 696

<210> 3946  
 <211> 165  
 <212> PRT  
 <213> Homo sapiens

<400> 3946  
 Met Gln Val Ile Ala Gly Ser Leu Ala Val Leu Ala Thr Ala Asp Pro  
 1 5 10 15  
 Gly Ser Ser Gly Gly His His Arg Ser Gly Asp Pro Gly Leu Ala Ala  
 20 25 30  
 Gly Leu Gln His His Lys Ala Val Gly Pro Gly His Leu Gln His Leu  
 35 40 45  
 Thr Glu Leu Arg Leu Arg Gln Arg Asp Leu Leu Glu Gln Arg Val Gln  
 50 55 60  
 Gly His Ala Ala Pro Val Gly Ala Gln Asp Phe Gly Asp Glu Ala Ala  
 65 70 75 80  
 His Leu Arg Val Arg His Gly Ala Leu Ala Val Leu Ala Leu Pro Arg  
 85 90 95  
 Arg Gly Thr Arg Phe Arg Gly Asn Arg Lys Ser Lys Leu Thr Ser Val  
 100 105 110  
 Gln Gly Arg Ala Arg Ala Val Leu Leu Gly Ala Pro Gly Val Ser  
 115 120 125  
 Glu Gly Ala Leu Ser Val Ala Val Ser Pro Ala Gln Arg Ser Thr Leu  
 130 135 140  
 Gly Ser Gln Val Lys Arg Leu Asp Leu Thr Asp Arg Val Leu Val Ala  
 145 150 155 160  
 Gly Leu Gln Pro Ala  
 165

<210> 3947  
 <211> 400  
 <212> DNA  
 <213> Homo sapiens

<400> 3947  
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 120  
 ctgcagggca tcatcgacga cttggtggtg ctgacagcag aacccccaaa actgcctccc  
 180  
 gccagcgagc aggtaatcaa agacctaaag ggctcggact acagctggtc ctaccagacc  
 240  
 ccaccctcat caccagcag ctccagctcc cggaagtcca gcatgtgcag tgccccagc  
 300

195	200	205
Phe Glu Val Phe Ile His Lys Val Asp Gly Leu Ser Asp Asp His Lys		
210	215	220
Ile Glu Thr Gln Arg Asp Ile His Gln Arg Ala Asn Asp Asp Leu Ala		
225	230	235
Asp Ala Gly Leu Glu Lys Ile His Leu Ser Phe Tyr Leu Thr Ser Ile		
245	250	255
Tyr Asp His Ser Ile Phe Glu Ala Phe Ser Lys Val Val Gln Lys Leu		
260	265	270
Ile Pro Gln Leu Pro Thr Leu Glu Asn Leu Leu Asn Ile Phe Ile Ser		
275	280	285
Asn Ser Gly Ile Glu Lys Ala Phe Leu Phe Asp Val Val Ser Lys Ile		
290	295	300
Tyr Ile Ala Thr Asp Ser Thr Pro Val Asp Met Gln Thr Tyr Glu Leu		
305	310	315
Cys Cys Asp Met Ile Asp Val Val Ile Asp Ile Ser Cys Ile Tyr Gly		
325	330	335
Leu Lys Glu Asp Gly Ala Gly Thr Pro Tyr Asp Lys Glu Ser Thr Ala		
340	345	350
Ile Ile Lys Leu Asn Asn Thr Thr Val Leu Tyr Leu Lys Glu Val Thr		
355	360	365
Lys Phe Leu Ala Leu Val Cys Phe Val Arg Glu Glu Ser Phe Glu Arg		
370	375	380
Lys Gly Leu Ile Asp Tyr Asn Phe His Cys Phe Arg Lys Ala Ile His		
385	390	395
Glu Val Phe Glu Val Arg Met Lys Val Val Lys Ser Arg Lys Val Gln		
405	410	415
Asn Arg Leu Gln Lys Lys Lys Arg Ala Thr Pro Asn Gly Thr Pro Arg		
420	425	430
Val Leu Leu		
435		

&lt;210&gt; 3945

&lt;211&gt; 696

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 3945

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60

agccgagagt ggatcgctgg gctgggctaa cggcgacgga gagcgcgccc tcgctgactc

120

cgggcgcgcc cagcagtagc accgcccgcg cccgcccctg gacacttgta agtttcgatt

180

tccgatttcc gcggaaccga gtcccgcgcc gcggcagagc cagcacagcc agcgcgccat

240

ggcggaccgc gaggtgtgct gttcatcac caaaatcctg tgcgccacg ggggcccgc

300

ggccctggac gcgctgctcc aggagatcgc gctgtctgag ccgcagctct gtgaggtgct

360

gcaggtggcc gggcccagacc gctttgtggt gttggagacc gcggcgagg ccgggatcac

420

ccgatcggtg gtggccacca ctcgagcccg ggtctgccgt cgcaagtact gccagagacc

480

gtcagtaaaa tttatattgc aactgatagt actccggtgg atatgcaaac ctatgagctc  
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 1020  
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 1080  
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 1140  
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 1200  
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 1320  
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 1380  
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 aaaaaaaaaa aaaaaaaaaa aaaa  
 1524

&lt;210&gt; 3944

&lt;211&gt; 435

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 3944

Ser	Arg	Gln	Lys	Ser	Ala	Ser	Glu	Ile	Gly	Cys	Gly	Arg	Pro	Ala	Arg
1				5					10					15	
Arg	Leu	Gly	Pro	Thr	Pro	Gly	Pro	Pro	Pro	Ser	Pro	Gly	Arg	Pro	Ala
			20					25					30		
Val	Gly	Thr	Met	Ser	Gln	Val	Leu	Gly	Lys	Pro	Gln	Pro	Gln	Asp	Glu
		35					40					45			
Asp	Asp	Ala	Glu	Glu	Glu	Glu	Glu	Asp	Glu	Leu	Val	Gly	Leu	Ala	
	50					55				60					
Asp	Tyr	Gly	Asp	Gly	Pro	Asp	Ser	Ser	Asp	Ala	Asp	Pro	Asp	Ser	Gly
65					70					75				80	
Thr	Glu	Glu	Gly	Val	Leu	Asp	Phe	Ser	Asp	Pro	Phe	Ser	Thr	Glu	Val
			85					90					95		
Lys	Pro	Arg	Ile	Leu	Leu	Met	Gly	Leu	Arg	Arg	Ser	Gly	Lys	Ser	Ser
			100					105					110		
Ile	Gln	Lys	Val	Val	Phe	His	Lys	Met	Ser	Pro	Asn	Glu	Thr	Leu	Phe
		115					120					125			
Leu	Glu	Ser	Thr	Asn	Lys	Ile	Cys	Arg	Glu	Asp	Val	Ser	Asn	Ser	Ser
	130					135					140				
Phe	Val	Asn	Phe	Gln	Ile	Trp	Asp	Phe	Pro	Gly	Gln	Ile	Asp	Phe	Phe
145				150						155				160	
Asp	Pro	Thr	Phe	Asp	Tyr	Glu	Met	Ile	Phe	Arg	Gly	Thr	Gly	Ala	Leu
			165					170					175		
Ile	Phe	Val	Ile	Asp	Ala	Gln	Asp	Asp	Tyr	Met	Glu	Ala	Leu	Thr	Arg
		180					185					190			
Leu	His	Ile	Thr	Val	Ser	Lys	Ala	Tyr	Lys	Val	Asn	Pro	Asp	Met	Asn

<211> 89  
 <212> PRT  
 <213> Homo sapiens

<400> 3942  
 Ala Pro Tyr Phe Pro Glu Gly Ala Pro Gly Leu Gln Gly His Leu Lys  
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 20 25 30  
 Gln Glu Arg Leu Arg Leu Thr Arg Gly Trp Ser Pro Gln Gly Gly Cys  
 35 40 45  
 Gly Ala Arg Ser Gln Ser Thr Pro Ser Ser Asp Thr Leu Pro Pro Ala  
 50 55 60  
 Leu Leu Gly Ser Pro Ala Ser Val Ser Gly Thr Gly Gly Thr Asp Met  
 65 70 75 80  
 Ser Ser Ala Asn Ala His Ser Ala Leu  
 85

<210> 3943  
 <211> 1524  
 <212> DNA  
 <213> Homo sapiens

<400> 3943  
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 gggaagccgc agccgcagga cgaggacgac gcggaggagg aggaggagga ggatgagctg  
 180  
 gtggggctag cggactacgg agacgggccc gactcctccg acgccgatcc ggacagcggc  
 240  
 acagaggagg gagttctgga cttcagtgac cccttcagca ctgaagtga gccgagaatc  
 300  
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&lt;210&gt; 3942



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<213> Homo sapiens

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<212> PRT

<213> Homo sapiens

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<211> 490

<212> DNA

<213> Homo sapiens

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&lt;213&gt; Homo sapiens

&lt;400&gt; 3936

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 65           70           75           80
Pro Ala Arg Pro Arg Tyr Ala Cys Cys Pro Gly Trp Lys Arg Thr Ser
 85           90           95
Gly Leu Pro Gly Ala Cys Gly Ala Ala Ile Cys Gln Pro Pro Cys Arg
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Trp Arg Gly Asp Thr Cys Gln Ser Asp Val Asp Glu Cys Ser Ala Arg
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165           170           175
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180           185           190
Gln Pro Trp Leu Cys Leu Ala Trp Gly Gly Gly Gln Ala Val Asp Ile
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&lt;210&gt; 3937

&lt;211&gt; 744

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 3937

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&lt;211&gt; 130

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 3934

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&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

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 Cys His Tyr Trp Lys Ser Ser Ser Ile Glu Glu Arg Gly Tyr Trp Gly  
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 Ser Gly Ser Ala Ile Met Ala Pro Ala Pro Phe Arg Ser Gln Ser Thr  
 50 55 60  
 Arg Ser Ser Ile Glu Asp Phe Asn Tyr Gly Ser Ser Val Ala Ser  
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 Ala Thr Val His Ile Arg Met Ala Phe Leu Arg Lys Val Tyr Ser Ile  
 85 90 95  
 Leu Ser Leu Gln Val Leu Leu Thr Thr Val Thr Ser Thr Val Phe Leu  
 100 105 110  
 Tyr Phe Glu Ser Val Arg Thr Phe Val His Glu Ser Pro Ala Leu Ile  
 115 120 125  
 Leu Leu Phe Ala Leu Gly Ser Leu Gly Leu Ile Phe Ala Leu Thr Leu  
 130 135 140  
 Asn Arg His Lys Tyr Pro Leu Asn Leu Tyr Leu Leu Phe Gly Phe Thr  
 145 150 155 160  
 Leu Leu Glu Ala Leu Thr Val Ala Val Val Val Thr Phe Tyr Asp Val  
 165 170 175  
 Tyr Ile Ile Leu Gln Ala Phe Ile Leu Thr Thr Thr Val Phe Phe Gly  
 180 185 190  
 Leu Thr Val Tyr Thr Leu Gln Ser Lys Lys Asp Phe Ser Lys Phe Gly  
 195 200 205  
 Ala Gly Leu Phe Ala Leu Leu Trp Ile Leu Cys Leu Ser Gly Phe Leu  
 210 215 220  
 Lys Phe Phe Phe Tyr Ser Glu Ile Met Glu Leu Val Leu Ala Ala Ala  
 225 230 235 240  
 Gly Ala Leu Leu Phe Cys Gly Phe Ile Ile Tyr Asp Thr His Ser Leu  
 245 250 255  
 Met His Lys Leu Ser Pro Glu Glu Tyr Val Leu Ala Ala Ile Ser Leu  
 260 265 270  
 Tyr Leu Asp Ile Ile Asn Leu Phe Leu His Leu Leu Arg Phe Leu Glu  
 275 280 285  
 Ala Val Asn Lys Lys  
 290

<210> 3933  
 <211> 4082



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1920  
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1980  
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960  
aaattacata tgatacaaat aaagattgta acagtattta atcattgttt caaactttat  
1020  
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&lt;400&gt; 3929

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&lt;210&gt; 3930

&lt;211&gt; 115

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 3930

Thr	Lys	Asn	Ser	Val	Thr	Trp	Trp	Pro	Cys	Leu	Val	Phe	Arg	Ser	Thr
1				5				10						15	
Pro	Pro	Arg	Cys	Ala	Gly	Arg	Ser	Ala	Pro	Leu	Ser	Gly	Pro	Asp	Ser
			20					25					30		
Gln	Ser	Glu	Asn	Glu	Ala	Ser	Pro	Val	Lys	Arg	Pro	Arg	Leu	Leu	Glu
		35					40					45			
Asn	Thr	Glu	Arg	Ser	Glu	Glu	Thr	Ser	Arg	Ser	Lys	Gln	Lys	Ser	Arg
	50				55					60					
Arg	Arg	Cys	Phe	Gln	Cys	Gln	Thr	Lys	Leu	Glu	Leu	Val	Gln	Gln	Glu
65				70					75					80	
Leu	Gly	Ser	Cys	Arg	Cys	Gly	Tyr	Val	Phe	Cys	Met	Leu	His	Arg	Leu
			85					90					95		
Pro	Glu	Gln	His	Asp	Cys	Thr	Phe	Asp	His	Met	Gly	Val	Ala	Gly	Arg
			100					105					110		
Ser	His	His													
			115												

&lt;210&gt; 3931

&lt;211&gt; 3568

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 3931

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 3197

&lt;210&gt; 3928

&lt;211&gt; 180

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 3928

Met	Ser	Glu	Ala	Ala	Thr	Arg	Trp	Ser	Cys	Gln	Gly	Ser	Cys	Gln	Lys
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Thr	Cys	Phe	Ser	Arg	Val	Arg	Pro	Trp	Arg	Arg	Arg	Cys	Ser	Cys	Gly
			20					25					30		
Asp	Ser	Ser	Ser	Arg	Arg	Arg	Arg	Ser	Cys	Cys	Thr	Gly	Ser	Leu	Gly
			35					40					45		
Pro	Met	Pro	Arg	Leu	Pro	Ser	Leu	Trp	Pro	Leu	Ser	Leu	Pro	Leu	Arg
	50					55					60				
Ser	Leu	Ser	Ser	Pro	His	Arg	Val	Gln	Gly	Leu	Gly	Pro	Pro	Arg	Arg
65					70					75				80	
Leu	Lys	Ser	Gln	Leu	Leu	Pro	Arg	Phe	Phe	Trp	Arg	Arg	Gln	Gln	Glu
			85					90					95		
Pro	Leu	Ser	Ser	Phe	Pro	Gly	Arg	Asn	Glu	Gly	Gly	Ser	Glu	Met	Glu
			100					105					110		
Ile	Leu	Gly	Val	Cys	Pro	Val	Ser	Pro	Gly	Ala	Leu	Ser	Tyr	Met	Glu
		115					120					125			
Ser	Pro	Thr	Gly	Phe	Trp	Arg	Pro	Arg	Glu	Ala	Ser	Ser	Leu	Glu	Leu
	130					135					140				
Ala	Lys	Gly	Ile	Ser	Lys	Arg	Arg	His	Phe	Leu	Pro	Ala	Pro	Ala	Leu
145					150					155				160	
Cys	Pro	Asn	Pro	Arg	Ser	Ser	Glu	Ala	Phe	Pro	Gly	Ala	Val	Cys	Val
				165				170					175		
Thr	Leu	Ala	Ile												
			180												

&lt;210&gt; 3929

&lt;211&gt; 470

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

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2640  
gaacaaagct tctgtccctc ccacacctct cacctcacag gcacatcagg ctgcagaatg  
2700

595	600	605
Leu Cys Gln Asn Gln Val Val Arg Glu Ala Ile Leu Glu Asp Leu Gln		
610	615	620
Lys Ile Gly Lys Glu Ser Gly Leu Lys Thr Phe Glu Gln Val Lys Ala		
625	630	635
Ile Phe Leu His Pro Glu Pro Phe Ser Ile Glu Asn Gly Leu Leu Thr		
645	650	655
Pro Thr Leu Lys Ala Lys Arg Gly Glu Leu Ser Lys Tyr Phe Arg Thr		
660	665	670
Gln Ile Asp Ser Leu Tyr Glu His Ile Gln Asp		
675	680	

&lt;210&gt; 3927

&lt;211&gt; 3197

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 3927

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600

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660

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780

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840

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900

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960

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1020

gagttggcca agggaataag caagaggaga catttccctc ctgccccagc actctgtccc  
1080

	165		170		175
Lys Ala Asp	Ile Ala Met Val Ile Cys Asp Thr Pro Gln Lys Ala Leu				
	180		185		190
Val Leu Ile	Gly Asn Val Glu Lys Gly Phe Thr Pro Ser Leu Lys Val				
	195		200		205
Ile Ile Leu	Met Asp Pro Phe Asp Asp Asp Leu Lys Gln Arg Gly Glu				
	210		215		220
Lys Ser Gly	Ile Glu Ile Leu Ser Leu Tyr Asp Ala Glu Asn Leu Asp				
	225		230		235
Lys Glu His	Phe Arg Lys Pro Val Pro Pro Ser Pro Glu Asp Leu Ser				
	245		250		255
Val Ile Cys	Phe Thr Ser Gly Thr Thr Gly Asp Pro Lys Gly Ala Met				
	260		265		270
Ile Thr His	Gln Asn Ile Val Ser Asn Ala Ala Ala Phe Leu Lys Cys				
	275		280		285
Val Glu His	Ala Tyr Glu Pro Thr Pro Asp Asp Val Ala Ile Ser Tyr				
	290		295		300
Leu Pro Leu	Ala His Met Phe Glu Arg Ile Val Gln Ala Val Val Tyr				
	305		310		315
Ser Cys Gly	Ala Arg Val Gly Phe Phe Gln Gly Asp Ile Arg Leu Leu				
	325		330		335
Ala Asp Asp	Met Lys Thr Leu Lys Pro Thr Leu Phe Pro Ala Val Pro				
	340		345		350
Arg Leu Leu	Asn Arg Ile Tyr Asp Lys Val Gln Asn Glu Ala Lys Thr				
	355		360		365
Pro Leu Lys	Lys Phe Leu Leu Lys Leu Ala Val Ser Ser Lys Phe Lys				
	370		375		380
Glu Leu Gln	Lys Gly Ile Ile Arg His Asp Ser Phe Trp Asp Lys Leu				
	385		390		395
Ile Phe Ala	Lys Ile Gln Asp Ser Leu Gly Gly Arg Val Arg Val Ile				
	405		410		415
Val Thr Gly	Ala Ala Pro Ile Ser Thr Pro Val Leu Thr Phe Phe Arg				
	420		425		430
Ala Ala Met	Gly Cys Trp Val Phe Glu Ala Tyr Gly Gln Thr Glu Cys				
	435		440		445
Thr Gly Gly	Cys Thr Phe Thr Leu Pro Gly Asp Trp Thr Ser Gly His				
	450		455		460
Val Gly Val	Pro Leu Ala Cys Asn Tyr Val Lys Leu Glu Asp Val Ala				
	465		470		475
Asp Met Asn	Tyr Phe Thr Val Asn Asn Glu Gly Glu Val Cys Ile Lys				
	485		490		495
Gly Thr Asn	Val Phe Lys Gly Tyr Leu Lys Asp Pro Glu Lys Thr Gln				
	500		505		510
Glu Ala Leu	Asp Ser Asp Gly Trp Leu His Thr Gly Asp Ile Gly Arg				
	515		520		525
Trp Leu Pro	Asn Gly Thr Leu Lys Ile Ile Asp Arg Lys Lys Asn Ile				
	530		535		540
Phe Lys Leu	Ala Gln Gly Glu Tyr Ile Ala Pro Glu Lys Ile Glu Asn				
	545		550		555
Ile Tyr Asn	Arg Ser Gln Pro Val Leu Gln Ile Phe Val His Gly Glu				
	565		570		575
Ser Leu Arg	Ser Ser Leu Val Gly Val Val Pro Asp Thr Asp Val				
	580		585		590
Leu Pro Ser	Phe Ala Ala Lys Leu Gly Val Lys Gly Ser Phe Glu Glu				

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 2640  
 gccaacagtc tctatgctta ttacatctt ctactgttca aactaagaga tttttaaatt  
 2700  
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 2760  
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 2820  
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 2880  
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 3180  
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 3296

&lt;210&gt; 3926

&lt;211&gt; 683

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 3926

Met	Leu	Phe	Ile	Phe	Asn	Phe	Leu	Phe	Ser	Pro	Leu	Pro	Thr	Pro	Ala
1				5					10					15	
Leu	Ile	Cys	Ile	Leu	Thr	Phe	Gly	Ala	Ala	Ile	Phe	Leu	Trp	Leu	Ile
			20					25					30		
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Pro Thr Asp Pro Val Leu Arg Glu Met Glu Gln Lys Leu Gln Gln Glu		
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&lt;211&gt; 3296

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 3925

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&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 3923

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&lt;211&gt; 250

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 3924

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Val Ser Gln Thr Lys Ala Glu Gln Asp Ser Asp Asn Lys Ser Ser Thr
50          55          60
Glu Ile Pro Leu Glu Thr Cys Cys Ser Ser Glu Leu Lys Gly Gly Gly
65          70          75          80
Ser Gly Thr Ser Leu Glu Arg Glu Gln Phe Glu Gly Leu Gly Ser Thr
85          90          95
Pro Asp Ala Lys Leu Asp Lys Thr Cys Ile Ser Arg Ala Met Lys Ile
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Thr Thr Val Asn Ser Val Leu Pro Gln Asn Ser Val Leu Gly Gly Val

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 His Leu Asn Arg Ala Met Trp Ser Leu Arg Glu Arg Ser Gln Val Ser  
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 Ser Leu Ala Pro Leu Leu Asp Ala Phe Leu Gln Pro Leu Glu Leu Arg  
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 Gln Cys Ser Val Arg Met Ile Ile Gly Phe Pro Pro Gln Phe Leu Ala  
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&lt;211&gt; 426

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 3920

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 Leu Thr Gln Glu Arg Asp Tyr Leu Gln Ala Gln His Pro Pro Ser Pro  
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 Lys Val Lys Gln Glu Asn Ile Gln Leu Ala Ala Asp Ala Arg Ser Ala  
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 Asp Val Asp Phe Tyr Lys Ala Arg Met Glu Glu Leu Arg Glu Asp Asn  
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<212> DNA

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Met Glu Glu Val Leu Leu Leu Gly Leu Lys Asp Lys Glu Gly Tyr Thr  
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Ser Phe Trp Asn Asp Cys Ile Ser Ser Gly Leu Arg Gly Gly Ile Leu  
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Arg Lys Lys Arg Leu Leu Asp Arg Lys Val Leu Leu Lys Ser Asp Ser  
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Pro Thr Gly Asp Val Leu Leu Asp Glu Thr Leu Lys His Ile Lys Ala  
115 120 125  
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 Val Asp Val Glu Asn Thr Asn Thr Ser Glu Ala Gly Val Lys Glu Phe  
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 His Ile Val Gln Val Ser Ser Ser Ser Lys His Trp Lys Leu Gln Lys  
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 Ser Val Asn Leu Ser Glu Asn Lys Asp Ala Lys Leu Ala Ser Arg Glu  
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 Lys Gly Lys Phe Cys Phe Lys Ala Ile Arg Cys Glu Lys Glu Glu Ala  
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 Ala Thr Gln Ser Ser Glu Lys Tyr Thr Phe Ala Asp Ile Ile Phe Gly  
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&lt;211&gt; 1802

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 3915

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 Ser Ala Thr Arg Val Phe Phe Gly His Asp Arg Arg Pro Ala Asp Gly  
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Gln Glu Ser Tyr Glu Asp Gly Pro Cys Thr Ile Thr Ser Asn Lys Asn		255
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Ser Asp Asn Asn Leu Leu Ser Leu Asp Gly Leu Asp Asn Glu Val Lys		270
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Asp Gly Leu Pro Asn Asn Phe Arg Ala His Pro Leu Gln Leu Glu Gln		285
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Ser Ser Asp Pro Ser Asn Ser Ile Asp Gly Pro Asp His Leu Arg Ser		300
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Ala Ser Ser Leu His Glu Thr Lys Lys Gly Asn Thr Gly Ile Ile His		320
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Gly Ala Cys Leu Thr Leu Thr Asp His Asp Arg Ile Arg Gln Phe Ile		335
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Gln Lys Phe Thr Phe Arg Gly Leu Leu Pro His Ile Glu Lys Thr Ile		350
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Arg Gln Leu Asn Asp Gln Leu Ile Ser Arg Lys Gly Leu Ser Arg Ser		365
	370	375
Leu Phe Ser Ala Thr Lys Lys Trp Phe Ser Gly Ser Lys Val Pro Glu		380
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Lys Ser Ile Asn Asp Leu Lys Asn Thr Ser Gly Leu Leu Tyr Pro Pro		400
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Glu Ala Pro Glu Leu Gln Ile Arg Lys Met Ala Asp Leu Cys Phe Leu		415
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Val Gln His Tyr Asp Leu Ala Tyr Ser Cys Tyr His Thr Ala Lys Lys		430
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Asp Phe Leu Asn Asp Gln Ala Met Leu Tyr Ala Ala Gly Ala Leu Glu		445
	450	455
Met Ala Ala Val Ser Ala Phe Leu Gln Pro Gly Ala Pro Arg Pro Tyr		460
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Pro Ala His Tyr Met Asp Thr Ala Ile Gln Thr Tyr Arg Asp Ile Cys		480
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<210> 3914

<211> 1435

<212> PRT

<213> Homo sapiens

<400> 3914

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Val	Pro	Cys	Val	Ala	Ala	Leu	Cys	Ser	Asp	Glu	Ala	Glu	Arg	Leu	Thr	20	25	30	
Arg	Leu	Asn	His	Leu	Ser	Phe	Ala	Glu	Leu	Leu	Lys	Pro	Phe	Ser	Arg	35	40	45	
Leu	Thr	Ser	Glu	Val	His	Met	Arg	Asp	Pro	Asn	Asn	Gln	Leu	His	Val	50	55	60	
Ile	Lys	Asn	Leu	Lys	Ile	Ala	Val	Ser	Asn	Ile	Val	Thr	Gln	Pro	Pro	65	70	75	80
Gln	Pro	Gly	Ala	Ile	Arg	Lys	Leu	Leu	Asn	Asp	Val	Val	Ser	Gly	Ser	85	90	95	
Gln	Pro	Ala	Glu	Gly	Leu	Val	Ala	Asn	Val	Ile	Thr	Ala	Gly	Asp	Tyr	100	105	110	
Asp	Leu	Asn	Ile	Ser	Ala	Thr	Thr	Pro	Trp	Phe	Glu	Ser	Tyr	Arg	Glu	115	120	125	
Thr	Phe	Leu	Gln	Ser	Met	Pro	Ala	Ser	Asp	His	Glu	Phe	Leu	Asn	His	130	135	140	
Tyr	Leu	Ala	Cys	Met	Leu	Val	Ala	Ser	Ser	Ser	Glu	Ala	Glu	Pro	Val	145	150	155	160
Glu	Gln	Phe	Ser	Lys	Leu	Ser	Gln	Glu	Gln	His	Arg	Ile	Gln	His	Asn	165	170	175	
Ser	Asp	Tyr	Ser	Tyr	Pro	Lys	Trp	Phe	Ile	Pro	Asn	Thr	Leu	Lys	Tyr	180	185	190	
Tyr	Val	Leu	His	Asp	Val	Ser	Ala	Gly	Asp	Glu	Gln	Arg	Ala	Glu		195	200	205	
Ser	Ile	Tyr	Glu	Glu	Met	Lys	Gln	Lys	Tyr	Gly	Thr	Gln	Gly	Cys	Tyr				

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&lt;210&gt; 3913

&lt;211&gt; 5237

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 3913

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Gln Gly Phe Glu Lys Lys Gly Pro Val Ser Gly Leu Gln Pro Ser Phe						
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Val Asn Ser Asp Thr Leu Leu Phe His Tyr Leu Phe Ala Thr Cys Asn						
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Cys Ile Gln Gly Pro Phe Ile Phe Leu Ser Tyr Val Val Leu Ser Lys						
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Glu Val Arg Lys Ala Leu Lys Leu Ala Cys Ser Arg Lys Pro Ser Pro						
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Pro Ser Pro Tyr Ala Asp Gly Arg Leu Tyr Gln Pro Tyr Gly Asp Ser						
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Gly Pro Pro Gly Leu Gly Asp Pro Gly Ser Leu Phe Leu Glu Gly Gln						
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Val Met Ser Ile Arg Glu Met Thr Gln Gly Ser Tyr Leu Glu Ile Lys
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Lys Gln Met Asp Lys Leu Asp Pro Leu Ala His Pro Leu Leu Gln Trp
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Ile Ile Ser Ser Asn Arg Ser His Ile Val Lys Leu Pro Leu Ser Arg
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Gln Leu Lys Phe Met His Thr Ser His Gln Phe Leu Leu Leu Ser Ser
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Pro Pro Ala Lys Glu Ala Arg Phe Arg Thr Ala Lys Lys Leu Tyr Gly
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Ser Thr Phe Ala Phe His Gly Ser His Ile Glu Asn Trp His Ser Ile
          450          455          460
Leu Arg Asn Gly Leu Val Asn Ala Ser Tyr Thr Lys Leu Gln Glu Trp
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Thr Thr Gly

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Leu	Ser	Asn	Asp	Phe	Leu	Lys	Thr	Gln	Gln	Glu	Lys	Arg	His	Ser	Trp	145	150	155	160
Phe	Lys	Ala	Ser	Gly	Thr	Ile	Lys	Lys	Phe	Arg	Ala	Gly	Leu	Ser	Ile	165	170	175	
Phe	Ser	Pro	Ile	Pro	Lys	Ser	Pro	Ser	Phe	Pro	Ile	Ile	Gln	Asp	Ser	180	185	190	
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Phe	Gly	Tyr	Pro	Pro	Ser	Pro	Gln	Val	Ser	Gly	His	Cys	Lys	Asn	Ile	225	230	235	240
Pro	Thr	Leu	Glu	Tyr	Gly	Phe	Leu	Val	Gln	Ile	Met	Lys	Tyr	Ala	Glu	245	250	255	
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Ala	Glu	Glu	Val	Ala	Thr	Gly	Ala	Glu	Val	Val	Asp	Leu	Leu	Val	Ala				

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&lt;210&gt; 3909

&lt;211&gt; 2704

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 3909

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Cys Phe Thr Ala Ser Arg	Ile Asp Ile Cys Leu Arg Lys Arg Gln Ser	415
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Gln Arg Trp Gly Gly Leu Glu	Ala Pro Ala Ala Arg Val Gly Gly Ala	430
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Lys Val Ala Val Pro Thr Gly	Pro Thr Pro Leu Asp Ser Thr Pro Pro	445
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Gly Gly Ala Pro His Pro Leu Thr	Gly Gln Glu Glu Ala Arg Ala Val	460
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Glu Lys Asp Lys Ser Lys Ala Arg	Ser Glu Asp Thr Gly Leu Asp Ser	480
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Val Ala Thr Arg Thr Pro Met Glu	His Val Thr Pro Lys Pro Glu Thr	495
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Ser Pro Val Ser Gly Asp Ser Val	Glu Glu Glu Glu Glu Glu Lys	525
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Cys Phe Met Asn Ser Val Ile Gln	Ser Leu Ser Asn Thr Arg Glu Leu	560
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Arg Asp Phe Phe His Asp Arg Ser	Phe Glu Ala Glu Ile Asn Tyr Asn	575
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Leu Lys Ala Ile Val Ala Ser Lys	Ala Ser Gln Phe Thr Gly Tyr Ala	620
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Gln His Asp Ala Gln Glu Phe Met	Ala Phe Leu Leu Asp Gly Leu His	640
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Ser Asp Gly Arg Pro Asp Glu Val	Ala Glu Glu Ala Trp Gln Arg	670
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His Lys Met Arg Asn Asp Ser Phe	Ile Val Asp Leu Phe Gln Gly Gln	685
	690	695
Tyr Lys Ser Lys Leu Val Cys Pro	Val Cys Ala Lys Val Ser Ile Thr	700
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Phe Asp Pro Phe Leu Tyr Leu Pro	Val Pro Leu Pro Gln Lys Gln Lys	720
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Val Leu Pro Val Phe Tyr Phe Ala	Arg Glu Pro His Ser Lys Pro Ile	735
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Lys Phe Leu Val Ser Val Ser Lys	Glu Asn Ser Thr Ala Ser Glu Val	750
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Leu Asp Ser Leu Ser Gln Ser Val	His Val Lys Pro Glu Asn Leu Arg	765
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Leu Ala Glu Val Ile Lys Asn Arg	Phe His Arg Val Phe Leu Pro Ser	780
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&lt;210&gt; 3908

&lt;211&gt; 1373

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 3908

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 Asp Arg Ala Asn Gln Glu Ser Lys Asp Gly Asp Pro Arg Lys Glu Thr  
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 Gly Ser Arg Tyr Val Ala Gln Ala Gly Leu Glu Pro Leu Ala Ser Gly  
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 Asp Pro Ser Ala Ser Ala Ser His Ala Ala Gly Ile Thr Gly Ser Arg  
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 His Arg Thr Arg Leu Phe Phe Pro Ser Ser Ser Gly Ser Ala Ser Thr  
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 Leu Leu Ala Thr Pro Thr Pro Glu Leu Leu Leu Asp Trp Arg Gln Ser  
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2880

	85		90		95
Gln Ser Ala Met Leu Gln Leu Asp Tyr Gly Asp Thr Val Trp Leu Arg					
	100		105		110
Leu His Gly Ala Pro Gln Tyr Ala Leu Gly Ala					
	115		120		

&lt;210&gt; 3907

&lt;211&gt; 4474

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 3907

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 1260

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      85              90              95
Leu Leu Pro Cys Leu Lys Ala Cys Ala Pro Ser Arg Val Val Val Val
      100              105              110
Ala Ser Ala Ala His Cys Arg Gly Arg Leu Asp Phe Lys Arg Leu Asp
      115              120              125
Arg Pro Val Val Leu Ala Ala Gly Ala Ala Ala Tyr Ala Asp Thr Lys
      130              135              140
Leu Ala Asn Val Leu Phe Ala Arg Glu Leu Ala Asn Gln Leu Glu Ala
      145              150              155              160
Thr Gly Val Thr Cys Tyr Ala Ala His Pro Gly Pro Val Asn Ser Glu
      165              170              175
Leu Phe Leu Arg His Val Pro Gly Trp Leu Arg Pro Leu Leu Arg Pro
      180              185              190
Leu Ala Trp Leu Val Pro Arg
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<210> 3905  
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 <212> DNA  
 <213> Homo sapiens

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370

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<210> 3906  
 <211> 123  
 <212> PRT  
 <213> Homo sapiens

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Leu Glu Gly Thr Ser Glu Met Ala Val Thr Phe Asp Lys Val Tyr Val
      20      25      30
Asn Ile Gly Gly Asp Phe Asp Val Ala Thr Gly Gln Phe Arg Cys Arg
      35      40      45
Val Pro Gly Ala Tyr Phe Phe Ser Phe Thr Ala Gly Lys Ala Pro His
      50      55      60
Lys Ser Pro Ser Val Met Leu Val Arg Asn Arg Asp Glu Val Gln Ala
      65      70      75      80
Leu Ala Phe Asp Glu Gln Arg Arg Pro Gly Ala Arg Arg Ala Ala Ser

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245 250 255  
 Leu His Ser Ala Ala Arg Pro Glu Thr Lys Val Ser Glu Gly Pro Val  
 260 265 270  
 Leu Val Leu Gln Pro Ala Ser Gly Leu Ser Phe Pro Val Leu Cys Pro  
 275 280 285  
 Pro Leu Pro Ala Val Gln Asp Pro Lys Thr Leu Ser Pro Thr Leu Ser  
 290 295 300  
 Ser Pro Gln Gly Cys Arg His Leu  
 305 310

&lt;210&gt; 3903

&lt;211&gt; 598

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 3903

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 420  
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&lt;210&gt; 3904

&lt;211&gt; 199

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 3904

Ala Arg Arg Gly Ala Arg Val Val Leu Ala Cys Arg Ser Gln Glu Arg  
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 Gly Glu Ala Ala Ala Phe Asp Leu Arg Gln Glu Ser Gly Asn Asn Glu  
 20 25 30  
 Val Ile Phe Met Ala Leu Asp Leu Ala Ser Leu Ala Ser Val Arg Ala  
 35 40 45  
 Phe Ala Thr Ala Phe Leu Ser Ser Glu Pro Arg Leu Asp Ile Leu Ile  
 50 55 60  
 His Asn Ala Gly Ile Ser Ser Cys Gly Arg Thr Arg Glu Ala Phe Asn  
 65 70 75 80  
 Leu Leu Leu Arg Val Asn His Ile Gly Pro Phe Leu Leu Thr His Leu

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<210> 3902

<211> 312

<212> PRT

<213> Homo sapiens

<400> 3902

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Val	His	Pro	Glu	Met	Pro	Pro	Gly	Val	Arg	Leu	Ser	Arg	Gly	Leu
		20					25					30		Val
Trp	Ala	Ala	Thr	Thr	Ala	Arg	Asn	Ala	Leu	Val	Val	Ser	Phe	Ala
		35				40					45			Ala
Leu	Val	Ala	Tyr	Ser	Phe	Glu	Val	Thr	Gly	Tyr	Gln	Pro	Phe	Ile
	50				55					60				Leu
Thr	Gly	Glu	Thr	Ala	Glu	Gly	Leu	Pro	Pro	Val	Arg	Ile	Pro	Pro
65				70					75				80	Phe
Ser	Val	Thr	Thr	Ala	Asn	Gly	Thr	Ile	Ser	Phe	Thr	Glu	Met	Val
			85					90				95		Gln
Asp	Met	Gly	Ala	Gly	Leu	Ala	Val	Val	Pro	Leu	Met	Gly	Leu	Leu
		100					105					110		Glu
Ser	Ile	Ala	Val	Ala	Lys	Ala	Phe	Ala	Ser	Gln	Asn	Asn	Tyr	Arg
		115				120					125			Ile
Asp	Ala	Asn	Gln	Glu	Leu	Leu	Ala	Ile	Gly	Leu	Thr	Asn	Met	Leu
	130				135					140				Gly
Ser	Leu	Val	Ser	Ser	Tyr	Pro	Val	Thr	Gly	Ser	Phe	Gly	Arg	Thr
145				150					155				160	Ala
Val	Asn	Ala	Gln	Ser	Gly	Val	Cys	Thr	Pro	Ala	Gly	Gly	Leu	Val
			165					170					175	Thr
Gly	Val	Leu	Val	Leu	Leu	Ser	Leu	Asp	Tyr	Leu	Thr	Ser	Leu	Phe
	180						185					190		Tyr
Tyr	Ile	Pro	Lys	Ser	Ala	Leu	Ala	Ala	Val	Ile	Ile	Met	Ala	Val
	195					200					205			Ala
Pro	Leu	Phe	Asp	Thr	Lys	Ile	Phe	Arg	Thr	Leu	Trp	Arg	Val	Lys
	210				215					220				Arg
Leu	Asp	Leu	Leu	Pro	Leu	Cys	Val	Thr	Phe	Leu	Leu	Cys	Phe	Trp
225				230					235				240	Glu
Val	Gln	Tyr	Gly	Ile	Leu	Ala	Gly	Ala	Leu	Val	Ser	Leu	Leu	Met
														Leu



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      100      105      110
Val Pro Glu Leu Gly Thr Xaa Gly Pro Ser Ala Ala Gly Gln Asp Leu
      115      120      125
Leu Gln His Gly Ala Cys Leu Gln Gln Glu Leu Asp Ser Arg Pro Gln
      130      135      140
Leu Arg Ser Val Leu Leu Cys Gly Ile Glu Ala Gln Ala Cys Ile Leu
145      150      155      160
Asn Thr Thr Leu Asp Leu Leu Asp Arg Gly Leu Gln Val His Val Val
      165      170      175
Val Asp Ala Cys Ser Ser Arg Ser Gln Val Asp Arg Leu Val Ala Leu
      180      185      190
Ala Arg Met Arg Gln Ser Gly Ala Phe Leu Ser Thr Ser Glu Gly Leu
      195      200      205
Ile Leu Gln Leu Val Gly Asp Ala Val His Pro Gln Phe Lys Glu Ile
      210      215      220
Gln Lys Leu Ile Lys Glu Pro Ala Pro Asp Ser Gly Leu Leu Gly Leu
225      230      235      240
Phe Gln Gly Gln Asn Ser Leu Leu His
      245

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&lt;210&gt; 3901

&lt;211&gt; 1287

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 3901

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840

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<210> 3900

<211> 249

<212> PRT

<213> Homo sapiens

<400> 3900

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			20					25					30		
Gly	Arg	Ser	Gly	Leu	Glu	Pro	Gly	Thr	Phe	Arg	Lys	Met	Ala	Ala	Ala
			35				40					45			
Arg	Pro	Ser	Leu	Gly	Arg	Val	Leu	Pro	Gly	Ser	Ser	Val	Leu	Phe	Leu
			50			55					60				
Cys	Asp	Met	Gln	Glu	Lys	Phe	Arg	His	Asn	Ile	Ala	Tyr	Phe	Pro	Gln
65					70					75				80	
Ile	Val	Ser	Val	Ala	Ala	Arg	Met	Leu	Lys	Val	Ala	Arg	Leu	Leu	Glu
				85					90					95	
Val	Pro	Val	Met	Leu	Thr	Glu	Gln	Tyr	Pro	Gln	Gly	Leu	Gly	Pro	Thr

340

345

&lt;210&gt; 3897

&lt;211&gt; 366

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 3897

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 ggtccc  
 366

&lt;210&gt; 3898

&lt;211&gt; 111

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 3898

Met	Glu	Glu	Ala	Leu	His	Ser	His	Leu	Gln	Leu	Ser	Gln	His	Arg	Val
1				5					10					15	
Met	Ala	Gly	Arg	Pro	Gly	Leu	Leu	His	Trp	Leu	Leu	Ala	Ser	Ser	Gly
			20					25					30		
His	Pro	Arg	Phe	Val	His	Glu	Trp	Lys	Ala	Met	Leu	Thr	Ala	Ala	Gln
		35					40					45			
Cys	Val	Gln	Asp	Val	Ser	Glu	Thr	Pro	Val	Pro	Leu	Pro	Val	Pro	Leu
	50					55				60					
Ser	Val	Pro	Leu	Ser	Thr	Ser	Val	Thr	Ser	Ser	Leu	Arg	Gly	Ser	His
65				70				75						80	
Pro	Thr	Leu	Cys	His	Cys	His	Ile	Phe	Leu	Cys	Ala	Gln	Pro	Leu	Pro
			85					90					95		
Pro	Pro	Glu	Thr	Phe	Leu	Glu	Ile	Ser	Lys	Cys	Asn	Ser	Arg	Ser	
			100					105					110		

&lt;210&gt; 3899

&lt;211&gt; 1092

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 3899

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1200

gttcaaaaaa aaaaaaaaaa aaaaaaa  
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<210> 3896

<211> 346

<212> PRT

<213> Homo sapiens

<400> 3896

Lys	Thr	Leu	Arg	Val	Val	Val	Tyr	Glu	Glu	Glu	Glu	Glu	Asp	Gly	Thr	1	5	10	15
Leu	Lys	Gln	His	Lys	Glu	Ala	Lys	Arg	Phe	Glu	Ile	Ala	Arg	Ser	Gln	20	25	30	
Pro	Glu	Asp	Thr	Pro	Glu	Asn	Thr	Val	Arg	Arg	Gln	Glu	Gln	Pro	Ser	35	40	45	
Ile	Glu	Ser	Thr	Ser	Pro	Ile	Ser	Arg	Thr	Asp	Glu	Ile	Arg	Lys	Asn	50	55	60	
Thr	Tyr	Arg	Thr	Leu	Asp	Ser	Leu	Glu	Gln	Thr	Ile	Lys	Gln	Leu	Glu	65	70	75	80
Asn	Thr	Ile	Ser	Glu	Met	Ser	Pro	Lys	Ala	Leu	Val	Asp	Thr	Ser	Cys	85	90	95	
Ser	Ser	Asn	Arg	Asp	Ser	Val	Ala	Ser	Ser	Ser	His	Ile	Ala	Gln	Glu	100	105	110	
Ala	Ser	Pro	Arg	Pro	Leu	Leu	Val	Pro	Asp	Glu	Gly	Pro	Thr	Ala	Leu	115	120	125	
Glu	Pro	Pro	Thr	Ser	Ile	Pro	Ser	Ala	Ser	Arg	Lys	Gly	Ser	Ser	Gly	130	135	140	
Ala	Pro	Gln	Thr	Ser	Arg	Met	Pro	Val	Pro	Met	Ser	Ala	Lys	Asn	Arg	145	150	155	160
Pro	Gly	Thr	Leu	Asp	Lys	Pro	Gly	Lys	Gln	Ser	Lys	Leu	Gln	Asp	Pro	165	170	175	
Arg	Gln	Tyr	Arg	Gln	Ala	Asn	Gly	Ser	Ala	Lys	Lys	Ser	Gly	Gly	Asp	180	185	190	
Phe	Lys	Pro	Thr	Ser	Pro	Ser	Leu	Pro	Ala	Ser	Lys	Ile	Pro	Ala	Leu	195	200	205	
Ser	Pro	Ser	Ser	Gly	Lys	Ser	Ser	Leu	Pro	Ser	Ser	Ser	Ser	Gly	Asp	210	215	220	
Ser	Ser	Asn	Leu	Pro	Asn	Pro	Pro	Ala	Thr	Lys	Pro	Ser	Ile	Ala	Ser	225	230	235	240
Asn	Pro	Leu	Ser	Pro	Gln	Thr	Gly	Pro	Pro	Ala	His	Ser	Ala	Ser	Leu	245	250	255	
Ile	Pro	Ser	Val	Ser	Asn	Gly	Ser	Leu	Lys	Phe	Gln	Ser	Leu	Thr	His	260	265	270	
Thr	Gly	Lys	Gly	His	His	Leu	Ser	Phe	Ser	Pro	Gln	Ser	Gln	Asn	Gly	275	280	285	
Arg	Ala	Pro	Pro	Pro	Leu	Ser	Phe	Ser	Ser	Ser	Pro	Pro	Ser	Pro	Ala	290	295	300	
Ser	Ser	Val	Ser	Leu	Asn	Gln	Gly	Ala	Lys	Gly	Thr	Arg	Thr	Ile	His	305	310	315	320
Thr	Pro	Ser	Leu	Thr	Ser	Tyr	Lys	Ala	Gln	Asn	Gly	Ser	Ser	Ser	Lys	325	330	335	
Ala	Thr	Pro	Ser	Thr	Ala	Lys	Glu	Thr	Ser										

	260		265		270										
Gly	Ser	Leu	Leu	Ser	Pro	Leu	Leu	Glu	Lys	Pro	Pro	Pro	Ser	Trp	Ser
	275		280		285										
Ala	Met	Arg	Asn	Arg	Lys	Tyr	Asn	Cys	Thr	Leu	Cys	Ser	Arg	Ser	Asp
	290		295		300										
Thr	Ile	Asp	Thr	Val	Ser	Val	Pro	Tyr	Val	Phe	Arg	Tyr	Phe	Val	Ala
305			310		315									320	
Glu	Leu	Ala	Ala	Met	Asn	Ile	Lys	Val	Lys	Leu	Asp	Val	Val		
			325				330								

&lt;210&gt; 3895

&lt;211&gt; 1227

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 3895

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1080aaaaaaatta acagtctaca acaactgttt tcacaagaga atgtaacata ttgctgtatc  
1140

tatcttttgtt caaaaagttc atgtcttctc aaaatatgaa atattgataa atggaagagc  
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 1320  
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 1380  
 agctgtaatg taattttata ttttcttata gccacgttga agtaaaaaca aacaggtaca  
 1440  
 gtgtttttta ccagctttat agaagtacag ttgttacata tttaatgaat acaatttgat  
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 1591

<210> 3894

<211> 334

<212> PRT

<213> Homo sapiens

<400> 3894

Arg	Val	Leu	Gln	Lys	Leu	Asp	Asp	Asp	Gly	Leu	Pro	Phe	Ile	Gly	Ala
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Lys	Leu	Gln	Tyr	Gly	Asp	Pro	Tyr	Tyr	Sér	Tyr	Leu	Asn	Leu	Asn	Thr
		20						25				30			
Gly	Glu	Ser	Phe	Val	Met	Tyr	Tyr	Lys	Ser	Lys	Glu	Asn	Cys	Val	Val
		35					40					45			
Asp	Asn	Ile	Lys	Val	Cys	Ser	Asn	Asp	Thr	Gly	Ser	Gly	Lys	Phe	Lys
	50					55					60				
Cys	Val	Cys	Ile	Thr	Met	Arg	Val	Pro	Arg	Asn	Pro	Thr	Ile	Gly	Asp
65				70						75				80	
Lys	Phe	Ala	Ser	Arg	His	Gly	Gln	Lys	Gly	Ile	Leu	Ser	Arg	Leu	Trp
			85						90					95	
Pro	Ala	Glu	Asp	Met	Pro	Phe	Thr	Glu	Ser	Gly	Met	Val	Pro	Asp	Ile
			100					105						110	
Leu	Phe	Asn	Pro	His	Gly	Phe	Pro	Ser	Arg	Met	Thr	Ile	Gly	Met	Leu
		115					120					125			
Ile	Glu	Ser	Met	Ala	Gly	Lys	Ser	Ala	Ala	Leu	His	Gly	Leu	Cys	His
	130					135						140			
Asp	Ala	Thr	Pro	Phe	Ile	Phe	Ser	Glu	Glu	Asn	Ser	Ala	Leu	Glu	Tyr
145					150					155				160	
Phe	Gly	Glu	Met	Leu	Lys	Ala	Ala	Gly	Tyr	Asn	Phe	Tyr	Gly	Thr	Glu
			165						170					175	
Arg	Leu	Tyr	Ser	Gly	Ile	Ser	Gly	Leu	Glu	Leu	Glu	Ala	Asp	Ile	Phe
		180						185					190		
Ile	Gly	Val	Val	Tyr	Tyr	Gln	Arg	Leu	Arg	His	Met	Val	Ser	Asp	Lys
		195					200						205		
Phe	Gln	Val	Arg	Thr	Thr	Gly	Ala	Arg	Asp	Arg	Val	Thr	Asn	Gln	Pro
	210					215						220			
Ile	Gly	Gly	Arg	Asn	Val	Gln	Gly	Gly	Ile	Arg	Phe	Gly	Glu	Met	Glu
225				230						235				240	
Arg	Asp	Ala	Leu	Leu	Ala	His	Gly	Thr	Ser	Phe	Leu	Leu	His	Asp	Arg
			245						250					255	
Leu	Phe	Asn	Cys	Ser	Asp	Arg	Ser	Val	Ala	His	Val	Cys	Val	Lys	Cys

130	135	140
Gln Leu Glu Arg Met Glu Ser Thr Asn Leu Val Lys Leu Leu Glu Thr		
145	150	155
Lys Pro Ser Thr Thr Ala Cys Cys Arg Ser Trp Ala Trp Ile Leu Thr		160
	165	170
Thr Ser Leu		175

&lt;210&gt; 3893

&lt;211&gt; 1591

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 3893

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 120  
 aagagtaaag aaaattgtgt tgtggataac atcaaagtgt gcagtaatga cactggggagt  
 180  
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 240  
 aaatttgcca gtcgccatgg gcagaagggc attttaagca gattgtggcc ggctgaggac  
 300  
 atgcctttta ctgagagtgg gatgggtccca gacattctgt tcaatcccca tggttttcca  
 360  
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 420  
 ggtctctgcc atgatgctac acccttcac ttctcagagg agaactcggc cttagaatac  
 480  
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 540  
 ggcacagtg ggctagaact ggaagcagac atcttcatag gattgggtta ttatcagcgc  
 600  
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 660  
 accaaccagc ctattggggg aagaaatgtc cagggtggaa tccgttttgg ggagatggaa  
 720  
 cgggatgcgc ttttagctca tggtagatct tttctccttc atgaccgct cttcaactgc  
 780  
 tcagatcggc cggtagccca tgtgtgtgtg aagtgtggca gtttactctc tccactgttg  
 840  
 gagaagccac ccccttcttg gtctgccatg cgcaacagaa aatacaactg tactctgtgt  
 900  
 agtcgcagtg acactatcga tactgtttct gtgccttatg tttttcggta tttttagct  
 960  
 gaactggcag ctatgaacat caaagtgaat ctggatgttg ttttaactga tgttgacctt  
 1020  
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 1080  
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 1200

tcgcagtctt ttccgtgaaa gaagagacaa gttgaccctc tgcccatttc cttatggacc  
 900  
 tcacccatca tgccagcagg gtcataggac ctggccttgt tccaaatcat ctgggacatg  
 960  
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 1020  
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 1080  
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 1140  
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 1200  
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 1260  
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 1320  
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 1680  
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 1687

&lt;210&gt; 3892

&lt;211&gt; 179

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 3892

Val	Arg	Val	Leu	Asn	Ile	Trp	Pro	Tyr	Pro	Gln	Gln	Glu	Cys	Leu	His
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Ser	Pro	Asn	Trp	Gln	His	Gln	Thr	Gly	His	Gly	Thr	Glu	Ser	Ser	Gly
		20						25				30			
Ser	Gly	Leu	Phe	Ala	Leu	Cys	Thr	Leu	Asp	Gly	Thr	Leu	Lys	Leu	Met
		35					40					45			
Glu	Glu	Met	Glu	Glu	Ala	Asp	Lys	Leu	Leu	Trp	Ser	Val	Gln	Val	Asp
		50				55					60				
His	Gln	Leu	Phe	Ala	Leu	Glu	Lys	Leu	Asp	Val	Thr	Gly	Asn	Gly	His
		65			70					75				80	
Glu	Glu	Val	Val	Ala	Cys	Ala	Trp	Asp	Gly	Gln	Thr	Tyr	Ile	Ile	Asp
			85					90					95		
His	Asn	Arg	Thr	Val	Val	Arg	Phe	Gln	Val	Asp	Glu	Asn	Ile	Arg	Ala
			100					105					110		
Phe	Cys	Ala	Gly	Leu	Tyr	Ala	Cys	Lys	Glu	Gly	Arg	Asn	Ser	Pro	Cys
			115					120					125		
Leu	Val	Tyr	Val	Thr	Phe	Asn	Gln	Lys	Ile	Tyr	Val	Tyr	Trp	Glu	Val



<211> 101  
 <212> PRT  
 <213> Homo sapiens

<400> 3890

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Ala Leu Pro Gly Pro Ser Leu Asp Gln Trp His Arg Ser Ala Gly Glu
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Glu Glu Asp Gly Pro Val Leu Thr Asp Glu Gln Val Pro Asn Pro Gly
      20             25             30
His Glu Ala His Asp Gln Gly Gly Trp Asp Ala Arg Gln Ser Ile Ile
      35             40             45
Arg Lys Val Val Asp Pro Glu Thr Gly Arg Thr Arg Leu Ile Lys Gly
      50             55             60
Asp Gly Glu Val Leu Glu Ile Val Thr Lys Glu Arg His Arg Glu
65             70             75             80
Ile Asn Lys Gln Ala Thr Arg Gly Asp Cys Leu Ala Phe Gln Met Arg
      85             90             95
Ala Gly Leu Leu Pro
      100
  
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<210> 3891  
 <211> 1687  
 <212> DNA  
 <213> Homo sapiens

<400> 3891

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120
acaggccacg gcaactgagag tagtggctct ggccctcttg ccctgtgcac cctggatggg
180
aactgaagc tcatggaaga aatggaagaa gcagacaagc tgctgtgggc agtgcagggtg
240
gatcaccagc tctttgcctt ggagaaactg gatgtcaccg gcaacgggca tgaggaggta
300
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360
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420
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480
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540
accacgcct gctgcaggag ctgggcgtgg atcctgacga cctccctgtg actcgtgcc
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tgcttcacca aacgctctac catccagacc agccaccaca gtgtgctccc tcaagcctcc
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720
ctaccccta aaggtatctg tggatttggc aggataggga atatgcatta cagaatgca
780
ggatttgact ctgggcatga aagatggcag cagccctagg gtgaccgtga actatagacc
840
  
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1025                      1030                      1035                      1040  
 Ile Arg Asp Leu Leu Asp Thr Val Leu Pro His Leu Tyr Asn Glu Thr  
                                  1045                      1050                      1055  
 Lys Val Arg Lys Glu Leu Ile Arg Glu Val Glu Met Gly Pro Phe Lys  
                                  1060                      1065                      1070  
 His Thr Val Asp Asp Gly Leu Asp Ile Arg Lys Ala Ala Phe Glu Cys  
                                  1075                      1080                      1085  
 Met Tyr Thr Leu Leu Asp Ser Cys Leu Asp Arg Leu Asp Ile Phe Glu  
                                  1090                      1095                      1100  
 Phe Leu Asn His Val Glu Asp Gly Leu Lys Asp His Tyr Asp Ile Lys  
 1105                      1110                      1115                      1120  
 Met Leu Thr Phe Leu Met Leu Val Arg Leu Ser Thr Leu Cys Pro Ser  
                                  1125                      1130                      1135  
 Ala Val Leu Gln Arg Leu Asp Arg Leu Val Glu Pro Leu Arg Ala Thr  
                                  1140                      1145                      1150  
 Cys Thr Thr Lys Val Lys Ala Asn Ser Val Lys Gln Glu Phe Glu Lys  
                                  1155                      1160                      1165  
 Gln Asp Glu Leu Lys Arg Ser Ala Met Arg Ala Val Ala Ala Leu Leu  
                                  1170                      1175                      1180  
 Thr Ile Pro Glu Ala Glu Lys Ser Pro Leu Met Ser Glu Phe Gln Ser  
 1185                      1190                      1195                      1200  
 Gln Ile Ser Ser Asn Pro Glu Leu Ala Ala Ile Phe Glu Ser Ile Gln  
                                  1205                      1210                      1215  
 Lys Asp Ser Ser Ser Thr Asn Leu Glu Ser Met Asp Thr Ser  
                                  1220                      1225                      1230

&lt;210&gt; 3889

&lt;211&gt; 556

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 3889

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 180  
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 540  
 aaaaaaaaaa aaaaaa  
 556

&lt;210&gt; 3890

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610	615	620
Arg Leu Thr Thr Val Lys Ala Leu Thr Leu Ile Ala Gly Ser Pro Leu		
625	630	635
Lys Ile Asp Leu Arg Pro Val Leu Gly Glu Gly Val Pro Ile Leu Ala		
645	650	655
Ser Phe Leu Arg Lys Asn Gln Arg Ala Leu Lys Leu Gly Thr Leu Ser		
660	665	670
Ala Leu Asp Ile Leu Ile Lys Asn Tyr Ser Asp Ser Leu Thr Ala Ala		
675	680	685
Met Ile Asp Ala Val Leu Asp Glu Leu Pro Pro Leu Ile Ser Glu Ser		
690	695	700
Asp Met His Val Ser Gln Met Ala Ile Ser Phe Leu Thr Thr Leu Ala		
705	710	715
Lys Val Tyr Pro Ser Ser Leu Ser Lys Ile Ser Gly Ser Ile Leu Asn		
725	730	735
Glu Leu Ile Gly Leu Val Arg Ser Pro Leu Leu Gln Gly Gly Ala Leu		
740	745	750
Ser Ala Met Leu Asp Phe Phe Gln Ala Leu Val Val Thr Gly Thr Asn		
755	760	765
Asn Leu Gly Tyr Met Asp Leu Leu Arg Met Leu Thr Gly Pro Val Tyr		
770	775	780
Ser Gln Ser Thr Ala Leu Thr His Lys Gln Ser Tyr Tyr Ser Ile Ala		
785	790	795
Lys Cys Val Ala Ala Leu Thr Arg Ala Cys Pro Lys Glu Gly Pro Ala		
805	810	815
Val Val Gly Gln Phe Ile Gln Asp Val Lys Asn Ser Arg Ser Thr Asp		
820	825	830
Ser Ile Arg Leu Leu Ala Leu Leu Ser Leu Gly Glu Val Gly His His		
835	840	845
Ile Asp Leu Ser Gly Gln Leu Glu Leu Lys Ser Val Ile Leu Glu Ala		
850	855	860
Phe Ser Ser Pro Ser Glu Glu Val Lys Ser Ala Ala Ser Tyr Ala Leu		
865	870	875
Gly Ser Ile Ser Val Gly Asn Leu Pro Glu Tyr Leu Pro Phe Val Leu		
885	890	895
Gln Glu Ile Thr Ser Gln Pro Lys Arg Gln Tyr Leu Leu Leu His Ser		
900	905	910
Leu Lys Glu Ile Ile Ser Ser Ala Ser Val Val Gly Leu Lys Pro Tyr		
915	920	925
Val Glu Asn Ile Trp Ala Leu Leu Leu Lys His Cys Glu Cys Ala Glu		
930	935	940
Glu Gly Thr Arg Asn Val Val Ala Glu Cys Leu Gly Lys Leu Thr Leu		
945	950	955
Ile Asp Pro Glu Thr Leu Leu Pro Arg Leu Lys Gly Tyr Leu Ile Ser		
965	970	975
Gly Ser Ser Tyr Ala Arg Ser Ser Val Val Thr Ala Val Lys Phe Thr		
980	985	990
Ile Ser Asp His Pro Gln Pro Ile Asp Pro Leu Leu Lys Asn Cys Ile		
995	1000	1005
Gly Asp Phe Leu Lys Thr Leu Glu Asp Pro Asp Leu Asn Val Arg Arg		
1010	1015	1020
Val Ala Leu Val Thr Phe Asn Ser Ala Ala His Asn Lys Pro Ser Leu		

3035

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 4980  
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 5040  
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 5160  
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&lt;210&gt; 3888

&lt;211&gt; 1230

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 3888

Met	Ala	Ser	Ala	Ser	Tyr	His	Ile	Ser	Asn	Leu	Leu	Glu	Lys	Met	Thr
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<211> 277

<212> PRT

<213> Homo sapiens

<400> 3886

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 Gln Val Leu Ala Ala Thr Tyr Asn Gln Ala Ala Gln Leu Trp Lys Val  
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<211> 5612

<212> DNA

<213> Homo sapiens

<400> 3887

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&lt;210&gt; 3884

&lt;211&gt; 199

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 3884

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 Ser Ser Ser Ser Ser Ser Ser Ser Ser Ser Ser Ser Ser Ser Ser  
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 Asp Gly Arg Lys Lys Arg Gly Lys Tyr Lys Asp Lys Arg Arg Lys Lys  
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&lt;210&gt; 3885

&lt;211&gt; 1671

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

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&lt;210&gt; 3883

&lt;211&gt; 943

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 3883

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&lt;210&gt; 3882

&lt;211&gt; 277

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 3882

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<210> 3880

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<212> PRT

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<400> 3880

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<212> DNA

<213> Homo sapiens

<400> 3881

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&lt;211&gt; 370

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 3878

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		20					25						30		
His	Ala	Lys	Lys	Ala	Asn	Gly	Pro	Asn	Tyr	Ile	Gln	Pro	Gln	Lys	Arg
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Gln	Thr	Thr	Phe	Glu	Ser	Gln	Asp	Arg	Lys	Ala	Val	Ser	Pro	Ser	Ser
	50					55				60					
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Lys	Ser	Leu	Ser	Leu	Ser	Ala	Lys	Thr	His	Asn	Ile	Gly	Phe	Asp	Lys
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		100					105						110		
Ser	Asp	Ser	Ser	Gly	Leu	Thr	Ser	Leu	Lys	Lys	Ser	Pro	Lys	Val	Ser
		115					120					125			
Ser	Lys	Asp	Thr	Arg	Glu	Ile	Lys	Thr	Asp	Phe	Ser	Leu	Ser	Ile	Ser
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&lt;210&gt; 3877

&lt;211&gt; 1112

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 3877

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Tyr Gly Cys Phe Leu Arg Val Tyr Met Gln Ser Lys Arg Lys Gly Glu				
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Phe His Arg Trp Ile Glu Arg Val Val Gly Trp Leu Gly Lys Val Phe				
	290		295	
Leu Gln Asp Gly Pro Ala Arg Pro Ala Ser Pro Glu Ala Gly Asn Thr				
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Leu Arg Arg Trp Arg Cys His Val Gln Arg Phe Phe Tyr Arg Ile Tyr				
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Asp Gln Arg Gln Gln Leu Leu Val Ser Leu Lys Ala Ala Leu Glu Thr				
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Leu Glu Val Ala Cys Glu Pro Ile Arg Arg Tyr Leu Arg Thr Arg Glu				
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&lt;211&gt; 824

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 3876

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			20					25					30		
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&lt;211&gt; 289

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 3874

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      50           55           60
Ser Thr Ser Ser Phe Ser Ser Met Ser Ala Gly Ser Arg Gln Glu Glu
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      85           90           95
Asp Gly Asp Leu Glu Met Val Arg Tyr Leu Leu Glu Trp Thr Glu Glu
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Asp Leu Glu Asp Ala Glu Asp Thr Val Ser Ala Ala Asp Pro Glu Phe
      115          120          125
Cys His Pro Leu Cys Gln Cys Pro Lys Cys Ala Pro Ala Gln Lys Arg
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Asp Gly Ser Ser Pro Leu His Val Ala Ala Leu His Gly Arg Ala Asp
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Leu Ile Arg Leu Leu Lys His Gly Ala Asn Ala Gly Ala Arg Asn
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Gln Val Val Lys Cys Leu Leu Asp Ser Asn Ala Lys Pro Asn Lys Lys
      210          215          220
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      225          230          235          240Glu Leu
Val Ala Leu Leu Leu Gln His Gly Ala Ser Ile Asn Ala
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Leu Thr Ile Arg Gly Asn Thr Ala Leu His Glu Ala Val Ile Glu Lys
      260          265          270
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Cys

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&lt;210&gt; 3875

&lt;211&gt; 2640

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 3875

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<213> Homo sapiens

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<210> 3874

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 1140  
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 1226

<210> 3870  
 <211> 100  
 <212> PRT  
 <213> Homo sapiens

<400> 3870  
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 Leu Leu Gly Ser Gln Trp His Leu Ser Val Ala Ser Tyr Leu Pro Gly  
 35 40 45  
 Pro Gly Trp Gly Thr Val Cys Gly His Glu Ala Arg Pro Pro Pro Ala  
 50 55 60  
 Pro Leu Pro Arg Gly Ser Ser Ile Pro Leu His Phe Trp Asn Val Cys  
 65 70 75 80  
 Ala Ser Met Met Phe Val Tyr Leu Arg His Leu Lys Ile Tyr Phe Arg  
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 Tyr Glu Gly Lys  
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<210> 3871  
 <211> 473  
 <212> DNA  
 <213> Homo sapiens

<400> 3871  
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 240  
 aaaaaacata aggagagaga tcttaaacga ggtaaatcga gagaatcagt ggattcccga  
 300  
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 360  
 aagaaacaga agaaagacct ctgagagccg agacaagctg ggagcgaaaag gagattttcc  
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<210> 3872



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<210> 3869
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<212> DNA
<213> Homo sapiens
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3014

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 780  
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 900  
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<210> 3868

<211> 344

<212> PRT

<213> Homo sapiens

<400> 3868

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			20				25						30		
Gln	Leu	Ser	Glu	Met	His	Asp	Glu	Leu	Asp	Ser	Ala	Lys	Arg	Ser	Glu
	35					40					45				
Asp	Arg	Glu	Lys	Gly	Ala	Leu	Ile	Glu	Glu	Leu	Leu	Gln	Ala	Lys	Gln
	50					55					60				
Asp	Leu	Gln	Asp	Leu	Leu	Ile	Ala	Lys	Glu	Glu	Gln	Glu	Asp	Leu	Leu
65				70					75					80	
Arg	Lys	Arg	Glu	Arg	Glu	Leu	Thr	Ala	Leu	Lys	Gly	Ala	Leu	Lys	Glu
			85				90						95		
Glu	Val	Ser	Ser	His	Asp	Gln	Glu	Met	Asp	Lys	Leu	Lys	Glu	Gln	Tyr
		100				105					110				
Asp	Ala	Glu	Leu	Gln	Ala	Leu	Arg	Glu	Ser	Val	Glu	Glu	Ala	Thr	Lys
	115					120					125				
Asn	Val	Glu	Val	Leu	Ala	Ser	Arg	Ser	Asn	Thr	Ser	Glu	Gln	Asp	Gln
	130					135					140				
Ala	Gly	Thr	Glu	Met	Arg	Val	Lys	Leu	Leu	Gln	Glu	Glu	Asn	Glu	Lys
145				150						155				160	
Leu	Gln	Gly	Arg	Ser	Glu	Glu	Leu	Glu	Arg	Arg	Val	Ala	Gln	Leu	Gln
			165					170					175		
Arg	Gln	Ile	Glu	Asp	Leu	Lys	Gly	Asp	Glu	Ala	Lys	Ala	Lys	Glu	Thr
		180					185					190			
Leu	Lys	Lys	Tyr	Glu	Gly	Glu	Ile	Arg	Gln	Leu	Glu	Glu	Ala	Leu	Val
	195					200					205				
His	Ala	Arg	Lys	Glu	Glu	Lys	Glu	Ala	Val	Ser	Ala	Arg	Arg	Ala	Leu
	210					215					220				
Glu	Asn	Glu	Leu	Glu	Ala	Gln	Gly	Asn	Leu	Ser	Gln	Thr	Thr	Gln	
225				230				235						240	
Glu	Gln	Lys	Gln	Leu	Ser	Glu	Lys	Leu	Lys	Glu	Glu	Ser	Glu	Gln	Lys

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<210> 3866

<211> 109

<212> PRT

<213> Homo sapiens

<400> 3866

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Ser	His	Asn	Phe	Lys	Phe	Leu	Val	Arg	Leu	Cys	Ser	Gln	Gly	Phe	Arg
		20						25					30		
Ile	Ile	Asn	Thr	Asn	Gly	Leu	Gly	Gln	Pro	Ser	His	Ser	Ser	Leu	Leu
		35					40					45			
Phe	Thr	Ser	Leu	Gln	Leu	Gln	Leu	Ser	Phe	Phe	Ile	Thr	Leu	Leu	Phe
	50					55					60				
Leu	Ser	Ser	Leu	Gly	Gln	Ile	Val	Gln	Thr	Glu	Tyr	Ser	Leu	Thr	Lys
65					70					75				80	
Met	Leu	Gly	Ser	Arg	Pro	Gly	Ala	Ala	Ala	His	Pro	Cys	Asn	Pro	Ser
				85				90					95		
Ile	Leu	Gly	Gly	Gln	Ser	Arg	Gln	Ile	Thr	Gln	Gly	Gln			
				100				105							

<210> 3867

<211> 1032

<212> DNA

<213> Homo sapiens

<400> 3867

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 180  
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 300  
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 480  
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&lt;400&gt; 3863

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 120  
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 240  
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 341

&lt;210&gt; 3864

&lt;211&gt; 108

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 3864

Met	Ala	Cys	Pro	Lys	Arg	Leu	Ile	Lys	Ile	Tyr	Ser	Asp	Ser	Ile	Met
1				5				10						15	
Ile	Gly	Trp	Leu	Ala	Trp	Asn	Val	Pro	Ser	Ala	Trp	Thr	Leu	Arg	Glu
			20					25					30		
Leu	Gly	Cys	Gln	Pro	Met	Ala	Arg	Trp	Phe	Ser	Gly	Ser	Leu	Asp	Gln
			35				40					45			
Lys	Asn	Leu	Val	Glu	Ile	Ser	His	Thr	Val	Phe	Phe	Pro	Glu	Ser	Gln
			50				55					60			
Leu	Arg	Ala	Lys	Leu	Lys	Cys	Pro	Gly	Gly	Ser	Cys	Thr	Pro	Gly	Leu
65					70					75				80	
Lys	Lys	Ile	Gly	Ser	Leu	Lys	Val	Ser	Cys	Glu	Glu	Phe	Leu	Leu	Met
				85					90					95	
Gly	Leu	Arg	Tyr	Gln	His	Leu	Asp	Pro	Pro	Ser	Arg				
				100				105							

&lt;210&gt; 3865

&lt;211&gt; 492

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 3865

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 aatcaggaat tgacgataag cttactacat tttgaaatta tctgactttc ctcatgaaat  
 120  
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 180  
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 240  
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 300  
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 360

caagccgtgc agcgcaacgg ggcacatcccc ggagttcagg cgcgcgacct ctttgcgcag  
 420  
 atcgccggcg ccgtgcgcta cctgcacgat catcacctgg tgcaccgcga cctcaagtgc  
 480  
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 540  
 cgccaggccc atggctaccc agacctgagc accacctact gcggtctcage cgtacgcgtc  
 600  
 acccgagtca tgcatttctt gagcacctac tgtctgccag gccccagagc tcatggcgaa  
 660  
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 748

<210> 3862

<211> 210

<212> PRT

<213> Homo sapiens

<400> 3862

Met	Ser	Gly	Asp	Lys	Leu	Leu	Ser	Glu	Leu	Gly	Tyr	Lys	Leu	Gly	Arg
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Thr	Ile	Gly	Glu	Gly	Ser	Tyr	Ser	Lys	Val	Lys	Val	Ala	Thr	Ser	Lys
		20						25					30		
Lys	Tyr	Lys	Gly	Thr	Val	Ala	Ile	Lys	Val	Val	Asp	Arg	Arg	Arg	Ala
		35					40				45				
Pro	Pro	Asp	Phe	Val	Asn	Lys	Phe	Leu	Pro	Arg	Glu	Leu	Ser	Ile	Leu
		50				55				60					
Arg	Gly	Val	Arg	His	Pro	His	Ile	Val	His	Val	Phe	Glu	Phe	Ile	Glu
65					70					75				80	
Val	Cys	Asn	Gly	Lys	Leu	Tyr	Ile	Val	Met	Glu	Ala	Ala	Ala	Thr	Asp
			85					90						95	
Leu	Leu	Gln	Ala	Val	Gln	Arg	Asn	Gly	Arg	Ile	Pro	Gly	Val	Gln	Ala
		100						105					110		
Arg	Asp	Leu	Phe	Ala	Gln	Ile	Ala	Gly	Ala	Val	Arg	Tyr	Leu	His	Asp
		115					120					125			
His	His	Leu	Val	His	Arg	Asp	Leu	Lys	Cys	Glu	Asn	Val	Leu	Leu	Ser
		130				135						140			
Pro	Asp	Glu	Arg	Arg	Val	Lys	Leu	Thr	Asp	Phe	Gly	Phe	Gly	Arg	Gln
145					150					155				160	
Ala	His	Gly	Tyr	Pro	Asp	Leu	Ser	Thr	Thr	Tyr	Cys	Gly	Ser	Ala	Val
			165					170					175		
Arg	Val	Thr	Arg	Val	Met	His	Phe	Leu	Ser	Thr	Tyr	Cys	Leu	Pro	Gly
		180						185					190		
Pro	Arg	Ala	His	Gly	Glu	Glu	Thr	Trp	Ala	His	Pro	Cys	Arg	Lys	Arg
		195					200						205		
Asp	Asn														
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<210> 3863

<211> 341

<212> DNA

<213> Homo sapiens

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 Met Ser Arg Asp Leu Ser Ile Gln Leu Pro Arg Pro Asp Gln Asn Val  
                                  100                      105                      110  
 Thr Arg Ser Arg Ser Lys Thr Tyr Pro Lys Arg Ile Ala Gln Thr Gln  
                                  115                      120                      125  
 Pro Ala Glu Ser Asn Thr Ile Ser Arg Ile Thr Ala Asn Met Glu Asn  
                                  130                      135                      140  
 Gly Glu Asn Glu Gly Thr Ile Lys Ile Ile Ala Pro Ser Pro Val Lys  
 145                                   150                      155                      160  
 Ser Phe Lys Lys Ala Lys Asn Glu Asn Ser Pro Asp Thr Gln Arg Ser  
                                  165                      170                      175  
 Lys Ser His Ala Pro Trp Glu Glu Asn Gly Pro Gln Ser Gly Leu Tyr  
                                  180                      185                      190  
 Asn Ser Pro Ser Asp Arg Thr Lys Ser Pro Lys Phe Pro Tyr Thr Arg  
                                  195                      200                      205  
 Arg Arg Asn Pro Ser Cys Gly Ser Asp Asn Asp Ser Val Gln Pro Val  
                                  210                      215                      220  
 Arg Arg Arg Lys Ala His Asn Ser Gly Glu Asp Ser Asp Leu Lys Gln  
 225                                   230                      235                      240  
 Arg Arg Arg Ser Arg Ser Arg Cys Asn Thr Ser Ser Gly Ser Glu Ser  
                                  245                      250                      255  
 Glu Asn Ser Asn Arg Glu His Arg Lys Lys Arg Asn Arg Ile Arg Gln  
                                  260                      265                      270  
 Glu Asn Asp Met Val Asp Ser Ala Pro Gln Trp Glu Ala Val Leu Arg  
                                  275                      280                      285  
 Arg Gln Lys Glu Lys Asn Gln Ala Asp Pro Asn Asn Arg Arg Ser Arg  
                                  290                      295                      300  
 His Arg Ser Arg Ser Arg Ser Pro Asp Ile Gln Ala Lys Glu Glu Leu  
 305                                   310                      315                      320  
 Trp Lys His Ile Gln Lys Glu Leu Val Asp Pro Ser Gly Leu Ser Glu  
                                  325                      330                      335  
 Glu Gln Leu Lys Glu Ile Pro Tyr Thr Lys Ile Glu  
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&lt;210&gt; 3861

&lt;211&gt; 748

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 3861

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 120  
 ggagagggca gctactccaa ggtgaagggtg gccacatcca agaagtacaa gggtagcgtg  
 180  
 gccatcaagg tgggtggaccg gcgggcagcg cccccggact tcgtcaacaa gttcctgccc  
 240  
 cgagagctgt ccatcctgcg gggcgtgcga caccgcaca tcgtgcacgt cttcagattc  
 300  
 atcgaggtgt gcaacgggaa actgtacatc gtgatggaag cggccgccac cgacctgctg  
 360

cctaagcgaa tagcacaac acagccagct gaatcaaaca ccatcagtag gataactgca  
 420  
 aacatggaaa atggagaaaa tgaaggaaca attaaaatta ttgcaccttc accagtaaaa  
 480  
 agctttaaga aagcaaagaa tgaaaatagc cctgataccc aaagaagcaa atctcatgca  
 540  
 ccgtgggaag aaaatggccc ccagagtggg ctctacaatt ctcccagtg tgcactaag  
 600  
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 660  
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 720  
 aggaggaggt cacgttcacg ctgtaacacc agcagtggta gtgaatcaga aaattcta  
 780  
 agagaacacc ggaaaaagag aaacagaata cggcaggaga atgatatggg tgattcagcg  
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 aggcgatcca gacacagatc tcgttcgaga agccccgata tccaagcaaa agaagagtta  
 960  
 tggaagcaca ttcaaaaaga acttgtggat ccatccggat tgtccgaaga acaattaaaa  
 1020  
 gagattccat aactaaaaat agagtgagtg cctttcagaa tcttctcacc aaagctttat  
 1080  
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 1140  
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 1440  
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 1449

<210> 3860

<211> 348

<212> PRT

<213> Homo sapiens

<400> 3860

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Lys	Val	His	Phe	Lys	Glu	Thr	Gln	Phe	Glu	Leu	Arg	Val	Leu	Gly	Lys
		20					25					30			
Asp	Cys	Asn	Glu	Thr	Ser	Phe	Phe	Phe	Glu	Ala	Arg	Ser	Lys	Thr	Ala
		35					40					45			
Cys	Lys	His	Leu	Trp	Lys	Cys	Ser	Val	Glu	His	His	Thr	Phe	Phe	Arg
	50					55				60					
Met	Pro	Glu	Asn	Glu	Ser	Asn	Ser	Leu	Ser	Arg	Lys	Leu	Ser	Lys	Phe

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 420  
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 aatgcctttt tgctcctcg tcggagcact ctcggagaa cgggagcttg cgcttctcca  
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 660  
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<210> 3858

<211> 76

<212> PRT

<213> Homo sapiens

<400> 3858

Xaa	Arg	Ala	Thr	Thr	Arg	Thr	Ala	Ser	Gly	Ala	Arg	Ser	Trp	Ala	Trp
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Ala	Thr	Arg	Ala	Ala	Pro	Cys	Pro	Thr	Ser	Cys	Arg	Ala	Trp	Cys	Ser
			20					25					30		
Ala	Pro	Cys	Ser	Thr	Ser	Ala	Arg	Pro	Ser	Thr	Arg	Ser	Trp	Ala	Arg
		35					40					45			
Ser	Ile	Ser	Ala	Ala	Thr	Trp	Pro	Arg	Pro	Arg	Ala	Thr	Gly	Thr	Leu
	50					55					60				
Ala	Thr	Lys	Thr	Arg	Trp	Pro	Ala	Ser	Arg	Thr	Ala				
65					70						75				

<210> 3859

<211> 1449

<212> DNA

<213> Homo sapiens

<400> 3859

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 120  
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 180  
 acatttttta gaatgccaga aaatgaatcc aattcactgt caagaaaact cagcaagttt  
 240  
 ggatccatac gttataagca ccgctacagt ggcaggacag ctttgcaaat gagccgagat  
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<210> 3857
<211> 797
<212> DNA
<213> Homo sapiens
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3006

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 240  
 tatgtgggag atggcttctc atgcagtggg aacctgctgc aggtcctgat gtccttcccc  
 300  
 tcactcaciaa acttcttgac ggaagtgtg gcctattcca acagctcagc tcgaggccgt  
 360  
 gcatttctag aacacctgac tgacctgtcc atccgaggca cctctttgt gccacagaac  
 420  
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 480  
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 aagcaagctg ctcatcactg ccagccagga cccactnncc aaccgacgga gaccaggttt  
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 660  
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 780  
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<210> 3856

<211> 330

<212> PRT

<213> Homo sapiens

<400> 3856

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 35 40 45  
 Leu Ser Glu Cys Tyr Arg Gly Phe Ala Asp Ser Glu Arg Lys Val Ile  
 50 55 60  
 Pro Ile Ile Ser Lys Cys Leu Glu Gly Met Ile Leu Ala Ala Lys Ser  
 65 70 75 80  
 Val Asp Glu Arg Arg Asp Ser Gln Met Val Val Asp Ser Phe Lys Ser  
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<210> 3855  
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<210> 3852

<211> 323

<212> PRT

<213> Homo sapiens

<400> 3852

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Leu	Gln	Gly	Gln	Val	Gln	Arg	Thr	Glu	Val	Ala	Arg	Gly	Arg	Leu	Glu
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Lys	Arg	Asn	Ser	Asp	Leu	Leu	Leu	Val	Asp	Thr	His	Lys	Lys	Gln	
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Ile	Asp	Gln	Lys	Glu	Ala	Asp	Tyr	Gly	Arg	Leu	Ser	Ser	Arg	Leu	Gln
			85					90						95	
Ala	Arg	Glu	Gly	Leu	Gly	Lys	Arg	Cys	Glu	Asp	Asp	Lys	Val	Lys	Leu
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Asn	Asp	Leu	Ala	Lys	Val	Asp	Asp	Leu	Pro	Pro	Ala	Leu	Arg	Lys	Pro
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Pro	Thr	Gly	Gln	Pro	Leu	Ser	Pro	Asn	Met	Pro	Pro	Asp	Ser	His	Ile
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	195		200		205
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	210		215		220
Arg	Ala Leu Lys Ala Ala Ala Ala Gln Lys Gln Ala Lys Arg Arg				
225		230		235	240
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Gln

&lt;210&gt; 3851

&lt;211&gt; 1183

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 3851

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<211> 257

<212> PRT

<213> Homo sapiens

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			20					25					30		
Phe	Pro	Phe	Asn	Gln	Trp	Gly	Leu	Gln	Pro	Arg	Ser	Leu	Leu	Leu	Gln
		35				40					45				
Ala	Ala	Arg	Gly	Tyr	Val	Val	Arg	Lys	Pro	Ala	Gln	Ser	Arg	Leu	Asp
		50				55				60					
Asp	Asp	Pro	Pro	Pro	Ser	Thr	Leu	Leu	Lys	Asp	Tyr	Gln	Asn	Val	Pro
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Gly	Ile	Glu	Lys	Val	Asp	Asp	Val	Val	Lys	Arg	Leu	Leu	Ser	Leu	Glu
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Met	Ala	Asn	Lys	Lys	Glu	Met	Leu	Lys	Ile	Lys	Gln	Glu	Gln	Phe	Met
			100				105					110			
Lys	Lys	Ile	Val	Ala	Asn	Pro	Glu	Asp	Thr	Arg	Ser	Leu	Glu	Ala	Arg
			115				120					125			
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			165						170					175	
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